ABM Industries (708) 675-0400

TECHNICAL SERVICE BULLETINS 2/24/89

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VIDEO VENDOR
service department

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

# TECHNICAL SERVICE BULLETIN 1a

## ERROR CODE INFORMATION FOR ALL SOFTWARE THRU 4.00.00

#1 THRU #7 Bubble Malfunction. This is usually a serous problem. Suggest you turn off power, holding bubble card by it's edges pull gently from it's socket and re-insert. Re-power machine. If the machine looks normal try printing out all lists. If it completes this task, then all may be O'K but call VIDEO VENDOR for advise.

#8 THRU #12 Error codes associated with assembly line software, normally not seen on production machines.

#13 Scratch Ram chip possibly defective. (U-13 board location)

#14 Ram one (U17 board location)

#15 General processor board problem (U-29 board location)

#16 Prom Zero (U-13 board location) if you just finished putting in new software, you probably missed a pin check carefully.

#17 Prom one (U-9 board location) see above message on prom zero.

#18 Prom two (U-13 board location) see above message prom zero

### DURING SELF-TEST THESE ERRORS MAY OCCUR
NOTE: THESE NUMBERS HAVE THESE MEANINGS ONLY DURING SELF-TEST

Version 4.00.00 software

| | | |
|---|---|---|
| #1 | Grabber out not blocked | Note: A tape should be in the transport |
| #2 | Tape top not clear | |
| #3 | Tape back not clear | |
| #4 | Tape front not clear | |
| #5 | Grabber in not blocked | |
| #6 | Tape back not blocked | |
| #7 | Tape front not blocked | |
| #10 | Tape back not clear (if slot empty) | Note: A tape should not be in the transport |
| #11 | Tape front not clear (if slot empty) | |

VIDEO VENDOR, INC.

MARCH 14,1989

# ERROR CODE CHART

**NOTE**: ON ERROR "99" YOU WILL SEE A PRINTOUT OF A SERIES OF NUMBERS. ONLY THE NUMBERS 98 AND FROM 150-161 INDICATE ERRORS YOU CAN DEAL WITH. THE OTHER NUMBERS ARE A SOFTWARE TRACE WHICH WILL HELP US TO SEE JUST WHAT COURSE THE COMPUTER TOOK TO ARRIVE AT THE PERCEIVED ERROR.

**150 TIMER ERROR**

This error code will show up whenever the computer expects the transport to move and it does not.

Ex. 1) Belt came off retriever and you do not have a "Grabber Out", see Code 160.
2) Blown Fuse.
3) Interlock on door not restored to correct position or it is defective.

**151 LAST TRANSACTION**

May indicate a tape in the transport and the computer does not know where to put it.

**152 TAPE ABOVE 320**
**153 LABEL CODE TOO HIGH**

**THESE CODES SHOULD NEVER OCCUR, IF THEY DO, CALL FOR ASSISTANCE.**

**154 TAPE BACK**

Tape Back infra-red sensor not blocked by tape when it should be.

**155 TAPE FRONT**

Tape Front infra-red sensor not blocked by tape when it should be.

**156 TAPE TOP**

Tape Top infra-red sensor not blocked by tape when it should be.

**157 X-HOME**

These codes refer to the -Home read. They would also show up on a blown fuse or any defect which would not allow the normal X-Home or Y-Home function to occur,

**158 Y-HOME**

a problem with the interrupter which goes through the respective X- or Y- encoder, or the card is defective. See Service Bulletin #7.

**159 GRABBER IN**

The retriever did not push the front limit switch in when it went forward to get a tape, causing the system to go into Error 99. See Service Bulletin #21.

**160 GRABBER OUT**

The retriever did not push the rear limit switch when it came back, and the system went into Error 99.

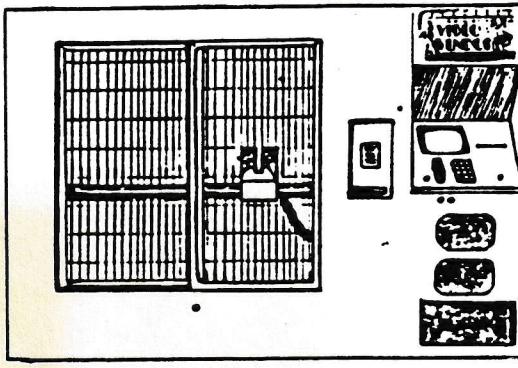
**161 TAPE WRONG**

Idicates a failure of the Tape Wrong Plate. See Service Bulletin #23 for adjustment.

**98 COMMUNICATIONS ERROR**

The processor incountered a communications error while down loading. This error will only appear in the transport error list.

VIDEO VENDOR
4236 MAIN STREET Service Department
SKOKIE, IL. 60076



# Technical Service Bulletin #1 revised

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

SEPTEMBER 7, 1987
SUBJECT: MAINTENANCE OF THE VERTICAL AND HORIZONTAL RAILS

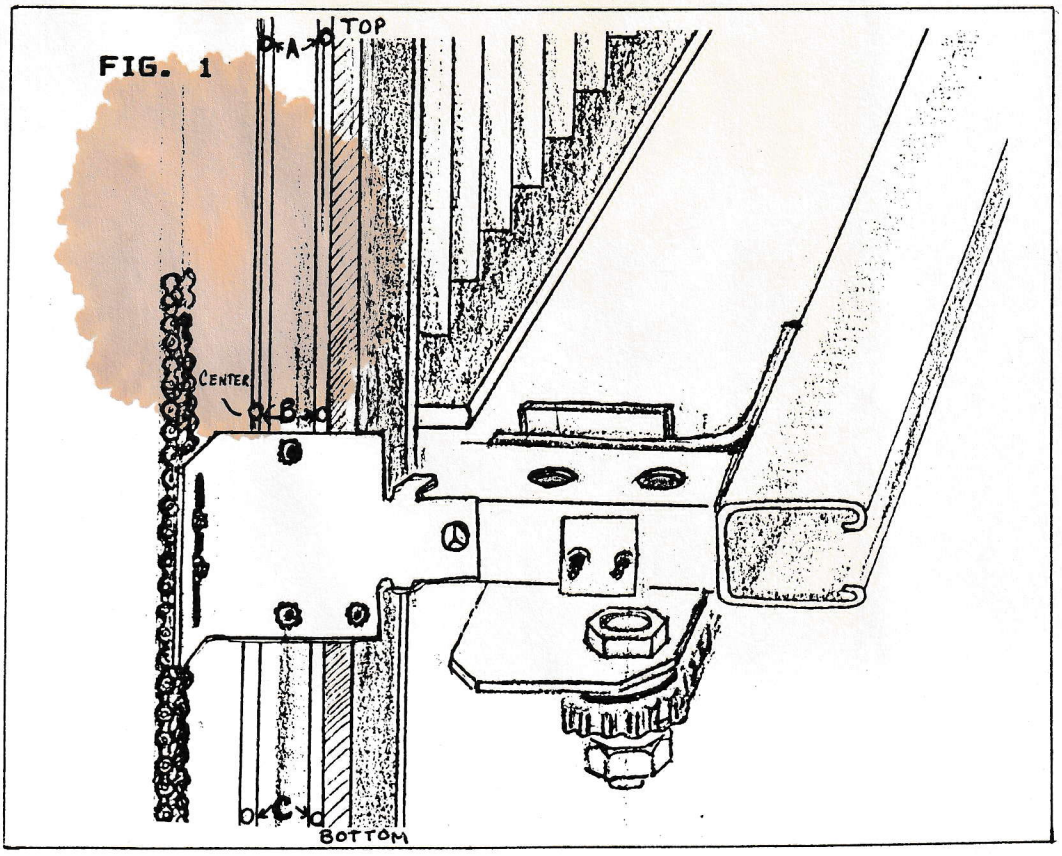
THIS BULLETIN REPLACES THE TECHNICAL SERVICE BULLETIN DATED 1/21/86 FOR ALL VIDEO VENDORS WHICH USE THE CAP SCREW ADJUSTABLE SUPPORT BRACKET SEE SERVICE BULLETIN #17 Fig. 1 A. FOR OLDER MACHINES, USING THE SHIM ADJUSTABLE BRACKET SHOWN IN BULLETIN #17 Fig. 1 B, CONTINUE TO FOLLOW THE ORIGINAL SERVICE BULLETIN.

We recommend that you periodically clean the vertical support rails and the horizontal transport rail (See Parts Manual pg. 12 item 10) of any loose flaking or chipped galvanized coating in the area where the roller bearings run on the rails. Lightly sand down if particularly rough.

Apply a light coat of WD-40 oil on the rails and WIPE IT OFF. Put a small amount of Teflon grease in the three places on each vertical rail (as indicated in FIG. 1 A, B & C) and allow the Vendor to work the grease in as it rents tapes under normal operation. CAUTION the Teflon grease must go ONLY on the outer, rolled edge of the rail channel where it comes in contact with the white, plastic Wear Plate (See Parts Manual pg. 12 item 16).

Teflon grease is available from Video Vendor, order Part # 11ND-112-1 : 1 Oz. container.

FIG. 1



**VIDEO VENDOR**
4235 MAIN STREET **Service Department**
SKOKIE, IL. 60076

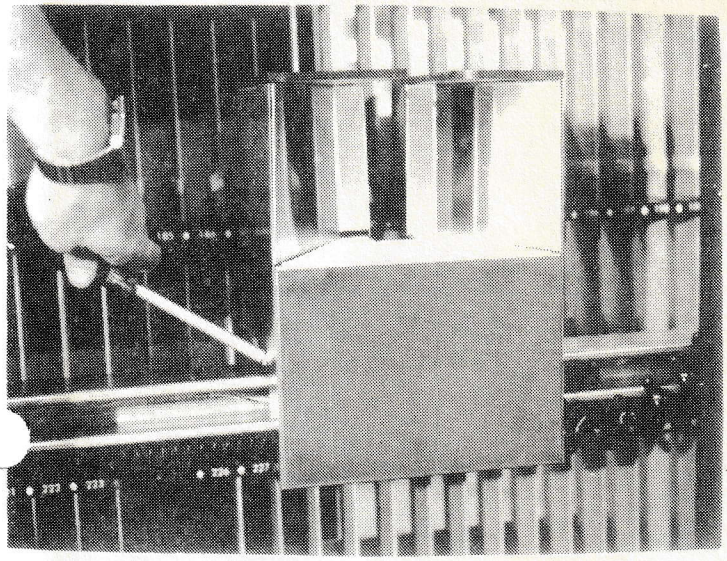
# Technical Service Bulletin

**# (2) — 2/10/86**

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

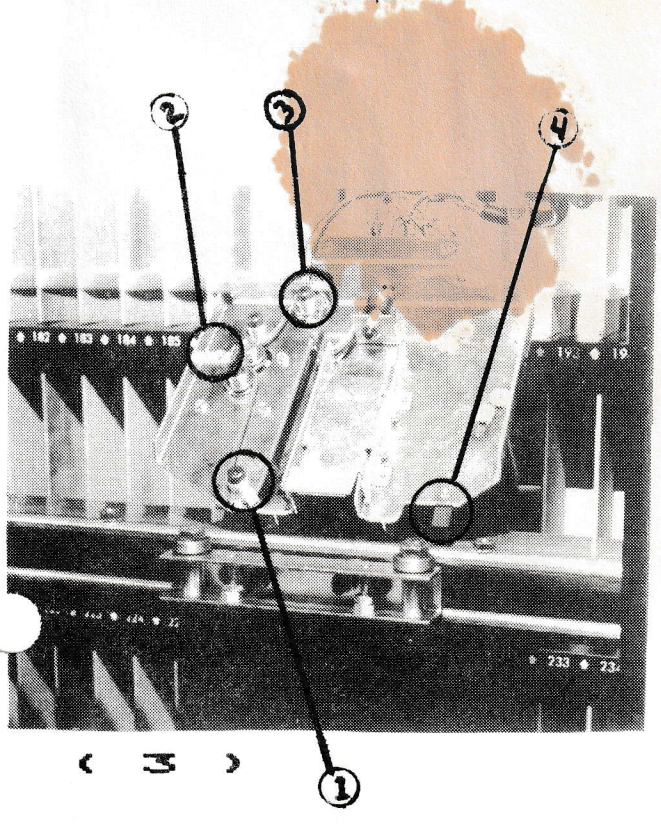
## OPENING TRANSPORT MECHANISM TO REPAIR OR ADJUST GRABBER DRIVE BELT

(a) Use Diagnostic controls to move transport to convenient position in LEXAN DOORWAY. Turn off main power switch. Open door.



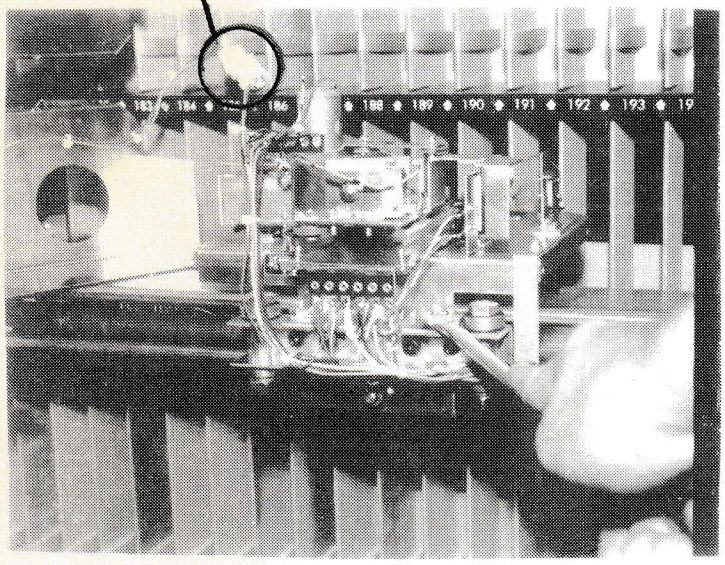
< 1 >

(b) Remove 4 screws holding transport cover




< 3 >

(c) unplug and remove transport cover



< 2 >

(d) Use 7/16" wrench and remove 2 nuts as shown. Note: two wrenches may be necessary one to hold bolt head underneath

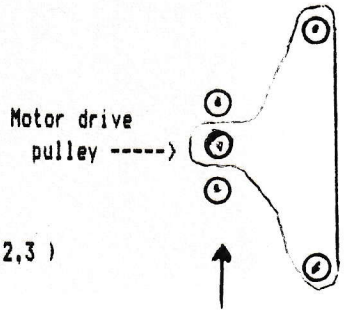
CAUTION: SINCE THE TRANSPORT ASSEMBLY FITS LOOSELY ON THE BOLTS ( SEE D #2) YOU MAY FIND THE X POSITION OFF A LITTLE AFTER RE-ASSEMBLY; WHEN TESTING A PICK-UP; IF SO ADJUST BY LOOSENING AND TWISTING TO RE-ALIGN.

(e) Remove top mechanism and turn upside down as shown and be careful of wires and plastic interrupter (photo #3 detail (4) ) If belt jumped off it may be neccessary to force the belt back on between the belt guards and their respective pulley's. Then bend belt guard fingers closer to belt.. see belt path diagram.

Belt guard fingers (photo #3 details 1,2,3 )

When re-assembling watch wire (c) photo #2. Coil around motor and make sure it does not interfere with mechanism operation. Make sure nuts (d) photo #2 are tight. Make sure plastic interrupter is straight as it must enter optical sensor to find ( x ) home position.

BELT PATH




CHECK THE IDLER PULLEY'S ON EACH SIDE OF THE MOTOR DRIVE PULLEY TO MAKE SURE IT TURNS FREELY...OIL SPARINGLY WHERE SCREW GOES THRU PULLEY TO WORK SOME INTO BUSHING HOLE. WIPE OF ANY DRIPS.

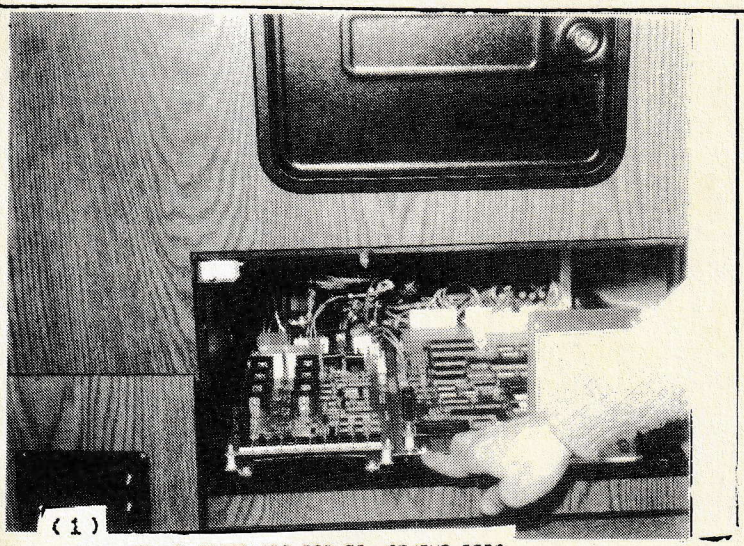
**VIDEO VENDOR**
4235 MAIN STREET
SKOKIE, IL. 60076

Service Department

REPLACING PLUG-IN PROMS
BULLETIN #3
3/6/86

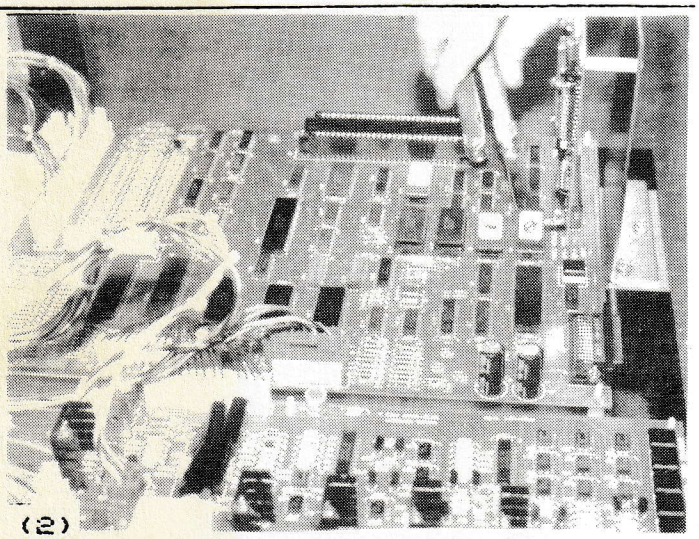
# Technical Service Bulletin

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



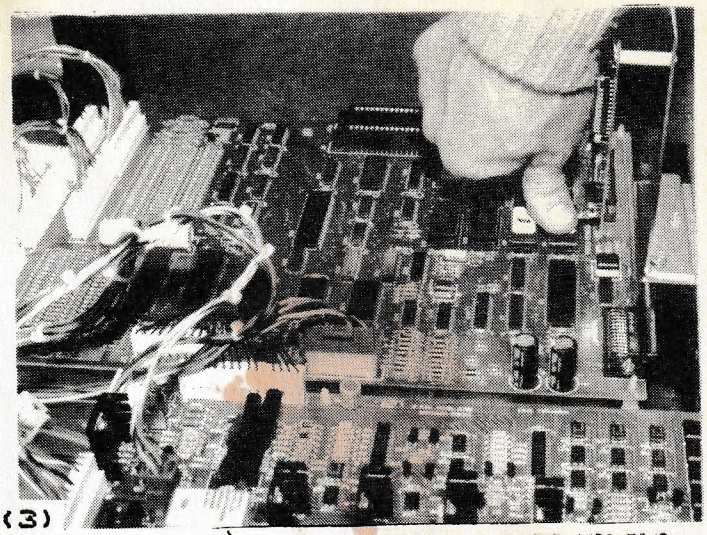
(1)

UNLOCK ELECTRONICS DRAWER. REMOVE DOOR.
PULL OUT BLACK SLIDE-OUT DRAWER.



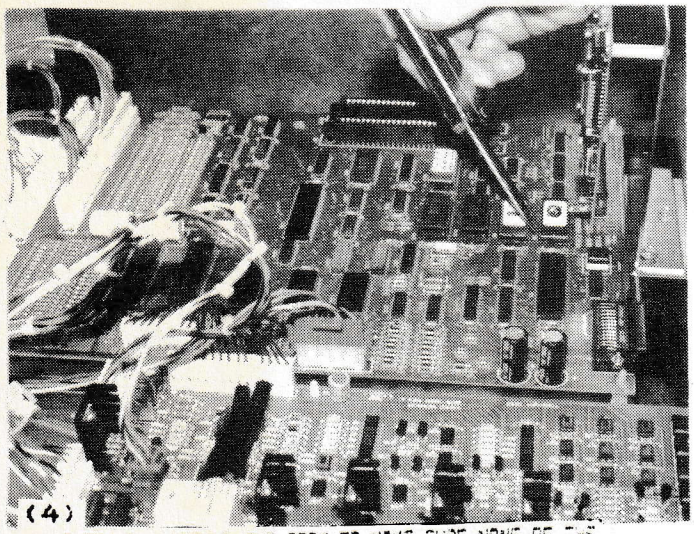
(2)

PROM 8 IS SHOWN BEING REMOVED FROM IT'S SOCKET.
METHOD:
SLIP A KNIFE BLADE UNDER ONE END OF THE PROM AND PRY GENTLY BUT NOT ALL THE WAY. REPEAT ON THE OTHER END. GENTLY ROCKING THE PROM CHIP OUT OF THE SOCKET.



(3)

POSITION NEW PROM 8 WITH KNOTCHED END TO THE LEFT (POINTING TOWARDS THE MOTOR CONTROLLER CARD) INTO THE SOCKET MAKING SURE ALL PINS ALIGN WITH THE SOCKET HOLES. THEN PRESS IN FIRMLY WITH YOUR THUMB.



(4)

CHECK ALL AROUND THE PROM TO MAKE SURE NONE OF THE LEADS WERE BENT OR ENDED UP OUTSIDE OF THE SOCKET.

AFTER PROM 8 AND PROM 1 HAVE BEEN CHANGED AND CHECKED. SLIDE DRAWER IN ALL THE WAY. WATCH CABLES IN THE REAR; THEY SOMETIMES NEED TO BE LIFTED UP TO ALLOW THE DRAWER TO SLIDE ALL THE WAY BACK.

CLOSE AND LOCK DOOR. RE-POWER MACHINE....AFTER A FEW SECONDS THE PRINTER SHOULD -PRINT- AND THE MONITOR SHOULD COME UP WITH THE DISPLAY.....

IF THE MONITOR OR PRINTER FAIL TO POWER UP
**SHUT THE MACHINE DOWN.....**
AND CALL **VIDEO VENDOR** IMMEDIATELY
**(312) 982-0440**

notes

NOV 04 '93 10:37 ABM:VID_VEND:SFFC:LAW

11/5/93

Dear Jeff -

Re: Error 88

1. Remove Key Card (Next to Bubble Card)

2. Clean Contact Points

3. Replace Card

Be Certain Machine is off when working w/Electronics

Barry Shore

VIDEO VENDOR P.1

ABM INTERNATIONAL INC.
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"Serving Industry Since 1947"

VIDEO VENDOR,INC
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(312) 982-0440

# TECHNICAL SERVICE BULLETIN # 3A

4/28/88

**ATTN: SERVICE DEPARTMENTS**

## HANDLING OF MEMORY DEVICES

***CAUTION***

Extreme care should be exercised when handling the memory modules, (Bubble Memory, RAM chips and ROM chips) which store the programs that operate the Video Vendor. These devices are state of the art and extremely reliable, however they are also vulnerable to accidental static electrical discharge. While handling these devices you should use good grounding protection techniques at all times. Grounding protection begins with a properly grounded A.C. electrical outlet. Install a circuit tester into the A.C. outlet which checks proper grounding and electrical polarity. If anything is wrong do not plug the Video Vendor in or anything else into that outlet until an electrician repairs the problem.

After assuring you have a correctly grounded machine plug the power cord back in. But make sure the power switch is off. this assures that the ground connection from the vendor to your outlet is complete. Next use a ground strap on your wrist. The ground strap should be connected to the metal holding bracket for the Bubble Memory Card (the one that has a caution message). This will provide a discharge path for any static while you are working with the Memory devices on the Vendor. Use these precautions even when removing the Memory devices from their packages.

**You should also do a full Bookkeeping before and after performing any work on the Memory devices. Even with all this protection there is no guarantee that you will not accidently cause a premature failure of one of these devices. Although their is a risk to losing data stored in your Bubble, the printouts you made would enable you to update your accounts.**

We beleive that the small risk involved for the short term is well worth the risk of handling the processor board for updating, in the long term. Version 3.00.04 software represents a major improvement to the Video Vendor's operation.

If preferred, we can supply you with an AC circuit tester, grounding wrist strap, IC chip inserter and soldering pick. Just order service kit X-103. The current cost for this kit is $30.00.

**Please call for help if you have any questions.**

4235 MAIN STREET
SKOKIE, IL. 60076

Service Department

# VIDEO VENDOR Technical Service Bulletin

# (4) — 2/12/86

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

## IT IS IMPORTANT:

THAT YOU CHECK ALL FOUR SPROCKETS ON THE LOWER SHAFT AS SHOWN IN THE PHOTO BELOW.....

THESE SPROCKETS ARE LOCATED ON THE LOWER MAIN DRIVE SHAFT IN THE BACK OF THE VENDOR.

THE SET SCREW MAY COME LOOSE FROM SHIPPING OR OTHER VIBRATIONS ALLOWING THE SPROCKETS TO FALL OFF OF THEIR RESPECTIVE SHAFTS.

BEFORE TIGHTENING THE SET SCREW MAKE SURE THAT THE KEY IN THE KEYWAY IS ALL THE WAY UNDER THE SET SCREW.....

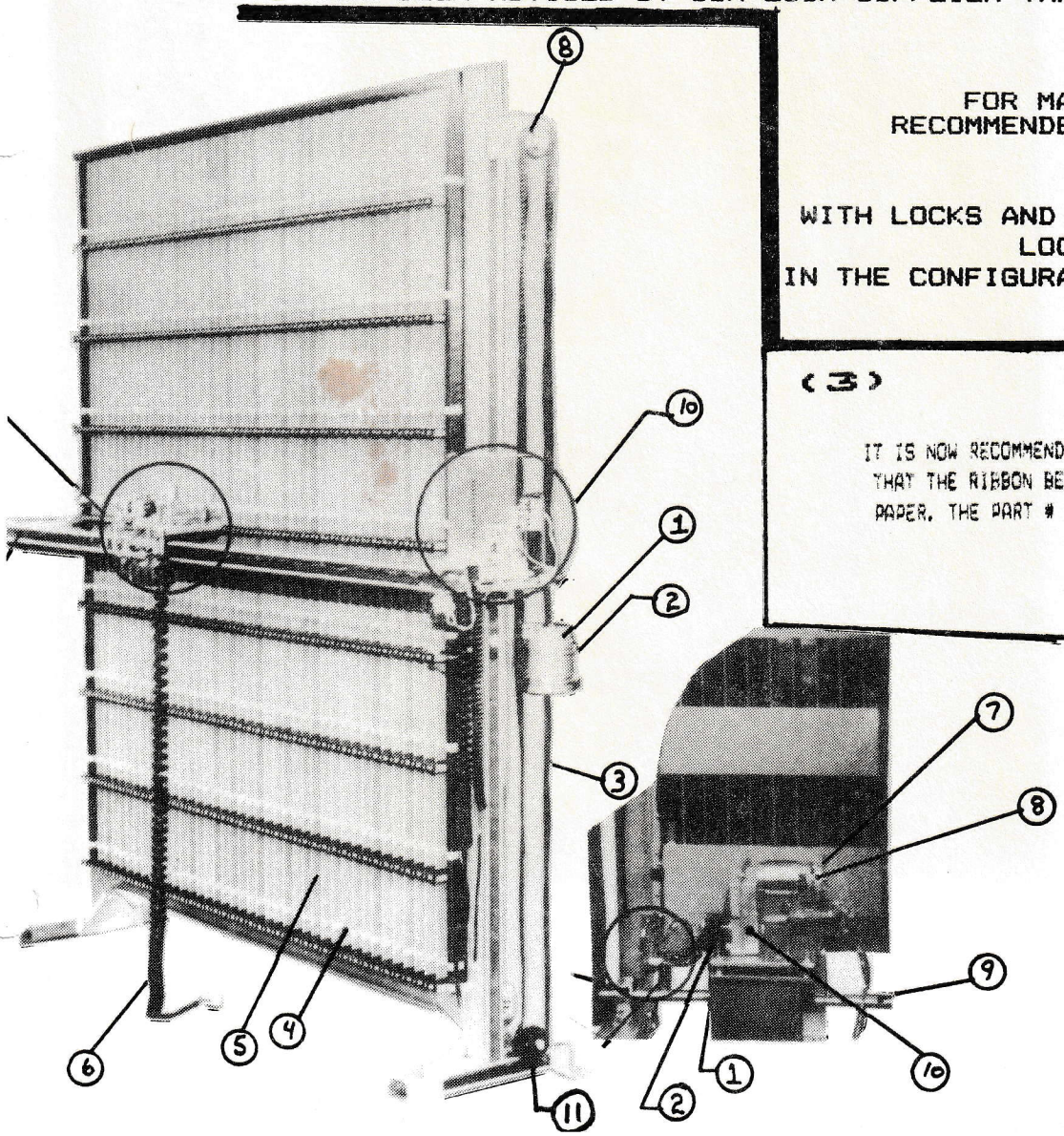
---

(2) WE HAVE BEEN ADVISED BY OUR LOCK SUPPLIER THAT .....

FOR MAXIMUM SECURITY IT IS RECOMMENDED THAT ALL THE LOCKS ON YOUR VIDEO VENDOR BE CHANGED WITH LOCKS AND KEYS FROM YOUR LOCAL LOCKSMITH IN THE CONFIGURATION OF YOUR CHOICE.

(3)

IT IS NOW RECOMMENDED THAT FOR MAXIMUM PRINTHEAD LIFE THAT THE RIBBON BE USED ALONG WITH THE SPECIAL IMPACT PAPER. THE PART # FOR THE RIBBON IS A-2955-1
PRINTHEAD A-2955-2




SHAFT (9) IS THE SHAFT WITH 3 SPROCKETS ON IT. ONE AT EACH END AND ONE BY THE MOTOR. THEIR IS ALSO ONE SPROCKET ON THE MOTOR TO BE CHECKED.

SPECIFICALLY CHECK SPROCKET PART #'S.. (11),(1),(2).

NOTE: THEIR ARE 2 # (11) SPROCKETS.

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BULLETIN # 5 03/1/86

# Technical Service Bulletin

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓

THE GOLD MECH.
25¢ COIN ACCEPTOR

## Service Information:
## CLEANING and CARE of the MECHANISM

Fig. 1

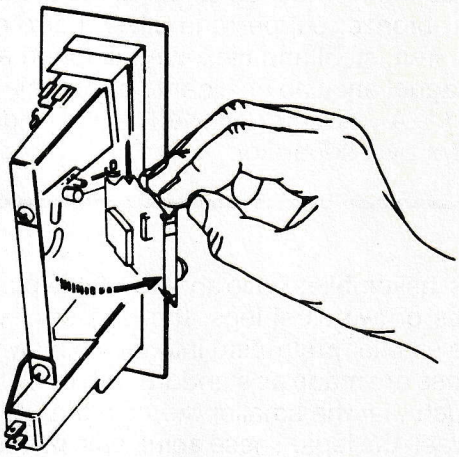
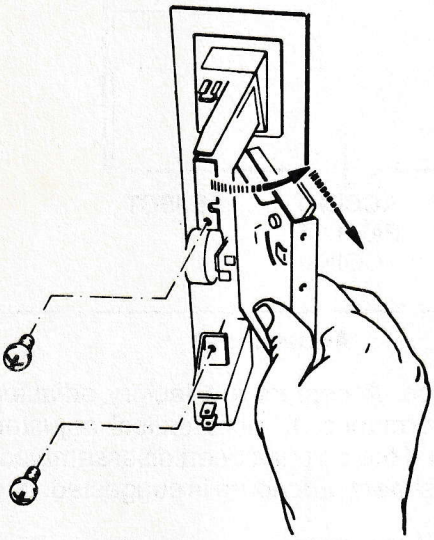


Fig. 2



The magnet that is fitted to the mechanism, should be kept clean from foreign particles. The standard magnet can be cleaned by swinging the gate open. (as shown in Fig. 1). Remove metal filings from the magnet by guiding the point of a screwdriver along the edges of the magnet, such that the filings cling to the joint.

The mechanism can be cleaned by immersing in boiling water using a small brush to clean the mechanism. Rinse the mechanism with boiling water and dry with compressed air.

Note:
Since the Gold Mech. relies on coins passing the magnet at a constant speed, the rejector must be free of dirt and grease which may slow down the coins. Do not lubricate the acceptor with oil as this slows down coins.

If the above procedures are not successful, check for worn or damaged parts and replace when necessary.

### Removal of Mechanism

To remove the coin selector: Unscrew the two screws (as shown in Fig. 2)—swing rear of selector body away from the lock-out side and withdraw.

The Gold Mech. Acceptors are designed to require a minimum of maintenance and field adjustment. Coins are checked by diameter and thickness, weight, metal content, bounce, and for ferromagnetic coins such as nickel and steel, a rim test is also used.

The first check on the coin is at the entry slot which prevents the entry of grossly oversize and bent coins. The next test is at the cradle. When the correct coin falls into the cradle, the cradle tipples and the coin is delivered to the magnet check. Under-diameter coins fall between the legs of the cradle and are returned to reject. Under-weight coins fail to tipple the cradle and can be returned to reject by pressing the reject button.

### Coin switch coin path adjustment

The coin switch comes in two different spring tensions—identified by the color of the plastic boss at the wire's pivot point.

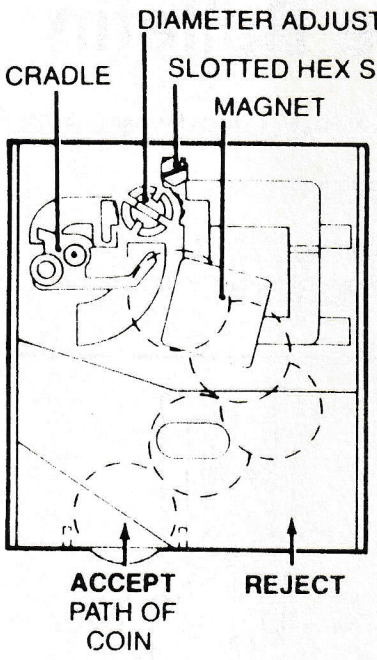
**Red:** Light tension

**White:** Heavy tension



-(OVER)-

Fig. 3




**Adjustment**

The Gold Mech. Acceptors are factory adjusted for optimum performance. If more critical adjustments are desired, or if the unit has been disassembled, the following adjustment procedure is suggested. (Fig. 3).

1. Ensure that the mechanism is in an upright and level position.

2. Loosen the hex locking screw on the magnet/rim test holder and unscrew the slotted hex screw.

3. Place a correct coin in the mechanism. Turn the slotted hex screw clockwise until the coin falls into the cradle. The cradle should tipple and the coin come to rest on the side of the magnet. Turn the slotted hex screw clockwise until the coin just clears the magnet. Give this screw a further ½ turn clockwise for optimum clearance and tighten the locknut.

# The Magnet

Coins that are too thick will fail to pass between the magnet and the backplate of the mechanism; and will be cleared by the magnet wiper when the reject button is actuated. (Fig. 4)

The metal content of the coin is next checked using magnets. The use of magnets make sure that if coins are travelling down the runway at the same speed a magnet will cause this speed to alter according to the metal content of the coin. This retardation of the coin is caused by the induction of eddy currents within the coin due to its passage through the magnetic field. Cupro-nickel is least affected by the magnetic field and leaves the runway fastest of all metals, followed by brass, bronze, copper and silver. Ferromagnetic coins i.e. iron, steel and nickel are stopped and held by the magnet and can be cleared by the reject wiper. For 25¢ U.S.A., the coin is slowed down and deflected into accept by a separator.

---

The latest assemblies have an adjustable plate. This comprises of two steel legs, the largest of which is fixed, the smaller protruding into the coin switch coin path. These are made as standard with three different bends such that the smaller the coin the greater the gap between the legs. These adjustable plates can be identified by the plates being stamped 1, 2 or 3 accordingly. (Fig. 5)

**Adjustment plates**

| Coin Size | Method of adjustment |
|---|---|
| 23.5-25mm | Adjuster plate 3 (stamped 3) |
| 25-27mm | Adjuster plate 2 (stamped 2) |
| 27-28.5mm | Adjuster plate 1 (stamped 1) |
| 28.5-30mm | No adjuster plate necessary |

For any further information contact our Technical Services Department.

Fig. 4

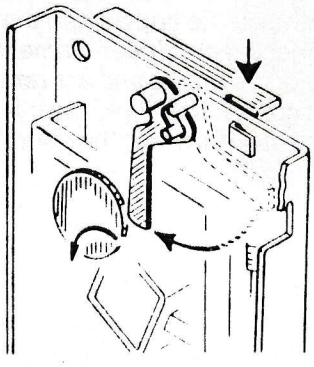
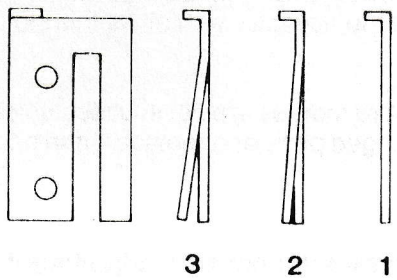


Fig. 5



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Service Department

BULLETIN # 6 -3/3/86

# Technical Service Bulletin

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓

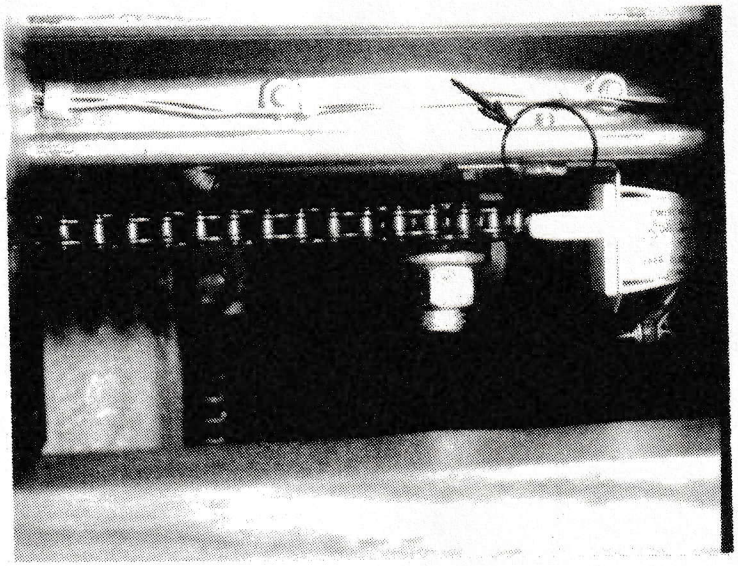
## I M P O R T A N T ! !

CHECK THE BOLTS AS SHOWN IN THE PHOTO'S BELOW TO BE SURE THAT THEY ARE THERE.

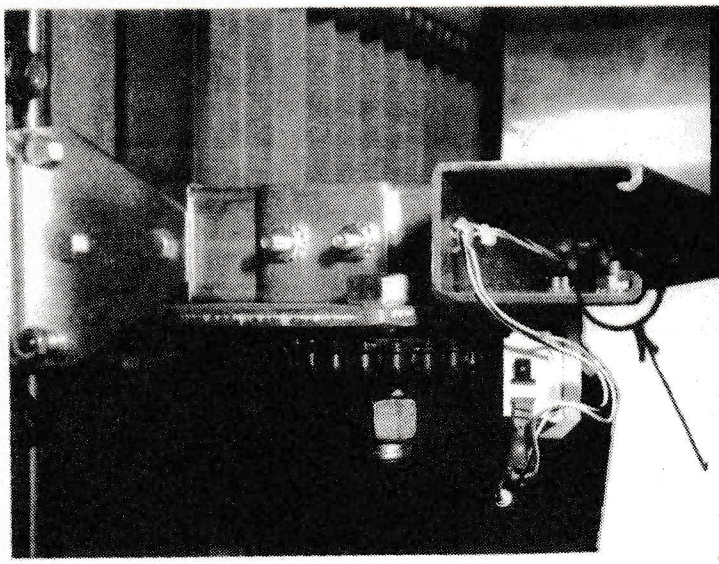
IT IS POSSIBLE THAT DURING SHIPMENT THESE TWO BOLTS MAY HAVE FALLEN OUT.

IF THE BOLTS ARE MISSING IT WOULD ALLOW THE TAPE TRANSPORT TO MOVE TO FAR RIGHT OR LEFT UNDER MANUAL CONTROL OR DURING A MACHINE MALFUNCTION....SO THAT THE X-ENCODER COULD BE DAMAGED OR THE OVERTRAVEL LIMIT SWITCHES BROKEN.
THESE BOLTS ARE LOCATED ON THE HORIZONTAL CHANNEL (PART # 1D-2470 PAGE 6 IN YOUR PARTS BOOK)

IF YOUR BOLT AND NUT IS MISSING PLEASE CALL IMMEDIATELY AND WE WILL SHIP THE CORRECT PART OR ADVISE A LOCAL SUBSTITUTE.



HORIZONTAL CARRIER RAISED TO ACCESS DOOR HEIGHT THIS IS VIEW THRU DOOR.



DOOR OPENED ON THE LEFT SIDE VIEW OF END OF HORIZONTAL CHANNEL

VIDEO VENDOR
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(312) 982-0440

BULLETIN # 7 -3/3/86

# Technical Service Bulletin

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

## UNDERSTANDING AND SERVICING THE X-HOME AND Y-HOME SYSTEM:

MACHINE SYMPTOMS:

(A) WHEN YOU TRY TO RENT A TAPE, THE TAPE CARRIER GOES UP AND LEFT BUT IN ABOUT 1 SECOND THE SYSTEM STOPS AND GOES BACK TO THE RIGHT OR DOWN, ALL THE WAY TO IT'S OVERTRAVEL LIMIT SWITCH IT STOPS AND WAITS ABOUT 30 SECONDS AND THEN REPEATS, THIS OCCURS ABOUT 3 TIMES BEFORE THE SYSTEM SHUTS DOWN WITH AN ERROR -99- MESSAGE ON THE SCREEN. ...THESE ARE THE SYMPTOMS WHEN THE (X) OR (Y) HOMES SHOW -NO- ON THE DIAGNOSTIC SCREEN ALL THE TIME.

(B) WHEN YOU TRY AND RENT A TAPE THE TAPE TRANSPORT CARRIER WILL MOVE LEFT OR UP FOR ABOUT 4-5 SECONDS AND THEN IT WILL STOP AND GIVE AN IMMEDIATE ERROR -99- CODE ON THE MONITOR SCREEN.... THESE ARE THE SYMPTOMS WHEN THE (X) OR (Y) HOMES SHOW -YES- ON THE DIAGNOSTIC SCREEN ALL THE TIME.

THE SOFTWARE MUST FIND AND SEE A -YES- AT THE HOME ENCODERS BEFORE IT CAN BEGIN TO LOOK FOR A TAPE...IT MUST ALSO GET A -NO- AS IT LEAVES THE HOME ENCODER...IT IS AT THAT MOMENT THAT THE X-COUNTER AND Y-COUNTER START INCREMENTING THEIR COUNT.

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DIAGNOSTICS:

OPTION (19) ON THE MENU WILL BRING YOU INTO THE DIAGNOSTICS ROUTINE. ••• photo (1).

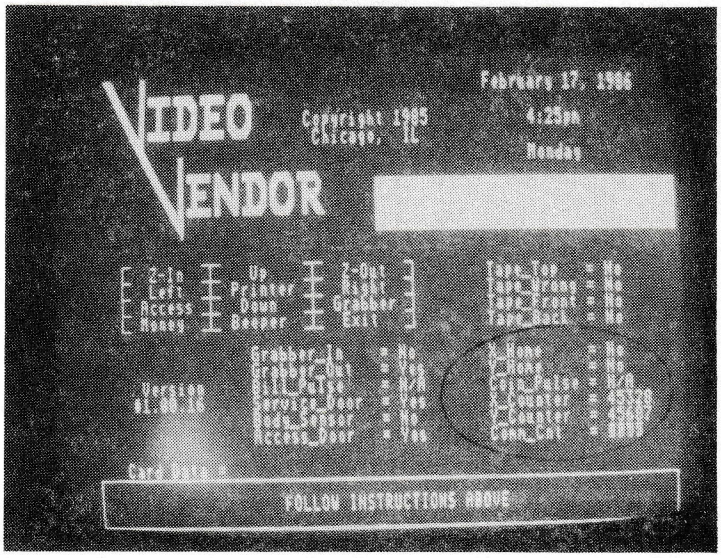


PHOTO (1)

DISPLAYED ON THE SCREEN WILL BE ALL OF THE ENCODER INFORMATION WE WILL NEED TO TEST FOR X-HOME AND Y-HOME CONDITIONS AND FAULTS.

THERE ARE TWO POSSIBLE CONDITIONS FOR EACH SWITCH...YES ... NO...
BEFORE BEGINNING THE INTERRUPTER TESTS AS DESCRIBED BELOW MAKE CERTAIN THAT THE PLASTIC INTERRUPTER IS IN FACT ENTERING THE BLACK -U-SHAPED HOME ENCODER. [ SEE PHOTO (2) ] . TO VIEW THE X-HOME ENCODER IT IS USUALLY NECESSARY TO REMOVE THE TAPE CARRIER TRANSPORT COVER IN ORDER TO SEE THE INTERRUPTER ENTER THE BLACK INFRA-RED HOME DETECTOR...BUT...WHEN YOU REMOVE THE COVER THE SYSTEM MAY NOW APPEAR CORRECT; THAT IS THE PLASTIC INTERRUPTER ENTERS THE U-SHAPED DETECTOR, WHEN YOU PUT THE COVER BACK ON THE SYSTEM FAILS....CAREFUL EXAMINATION MAY SHOW THAT THE INTERRUPTER IS JUST BARELY ENTERING THE LOWER EDGE OF THE HOME DETECTOR WITHOUT THE COVER ON. THE ADDED WEIGHT OF THE COVER AND A TAPE LOWERS THE ASSEMBLY JUST ENOUGH TO CAUSE THE INTERRUPTER TO HIT THE DETECTOR AND BE DEFLECTED ...SOLUTION---MAKE SURE THE INTERRUPTER ENTERS THE CENTER OF THE DETECTOR. CAUTION: DO NOT BEND THE PLASTIC INTERRUPTER TO MAKE THE ADJUSTMENT. THE ENCODER BOARD IS MOUNTED WITH 4-SCREWS AND THEY ALLOW FOR VERTICAL ADJUSTMENT. LOOSEN THE SCREWS SLIGHTLY AND PRY GENTLY UP OR DOWN ON THE BOARD EDGE TO SHIFT THE BOARD TO THE REQUIRED POSITION.
ONCE YOU HAVE DONE THIS TEST YOU WILL HAVE NOTICED THE DISPLAY OF THE HOME SWITCHES AND MAY HAVE ALREADY SOLVED YOUR PROBLEM BUT IF NOT PROCEED.....

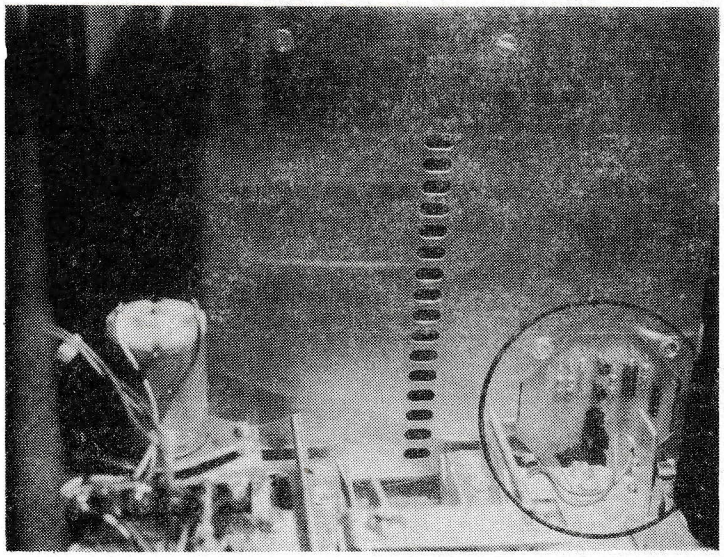

PHOTO (2)
showing the plastic interrupter entering the x- home encoder

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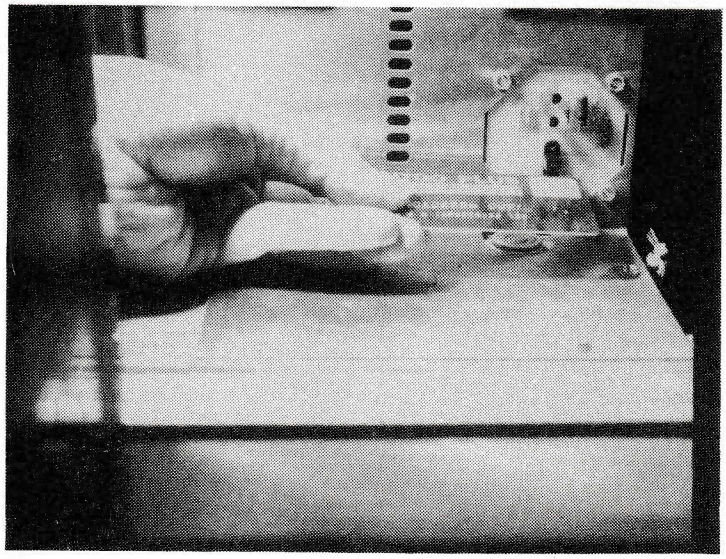
(A) THE X-HOME AND Y-HOME INDICATORS COULD REMAIN -YES- AS YOU MOVE AN OPAQUE CARD THRU THE INFRA-RED HOME ENCODER OR IT COULD SHOW -NO- AS THE CARD PASSES THRU AND -YES- AS IT ENTERS OR IT COULD SHOW -NO- ALL THE TIME

THE CORRECT CONDITION IS -NO- PRIOR TO THE CARD ENTERING THE ENCODER AND -YES- AS LONG AS THE CARD REMAINS IN THE ENCODER

NOW LET'S LOOK AT THE PHOTO'S TO SEE WHERE THE ENCODERS ARE AND HOW TO CHECK THEM WITH AN OPAQUE CARD....



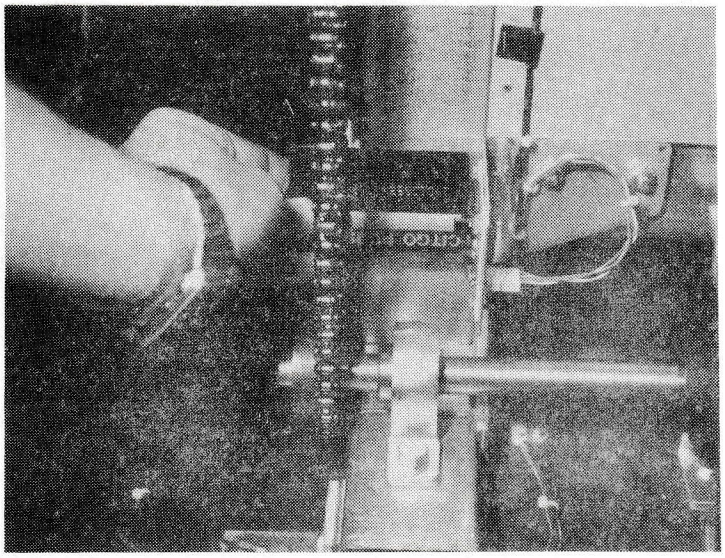


PHOTO (3)

testing x-home testing y-home

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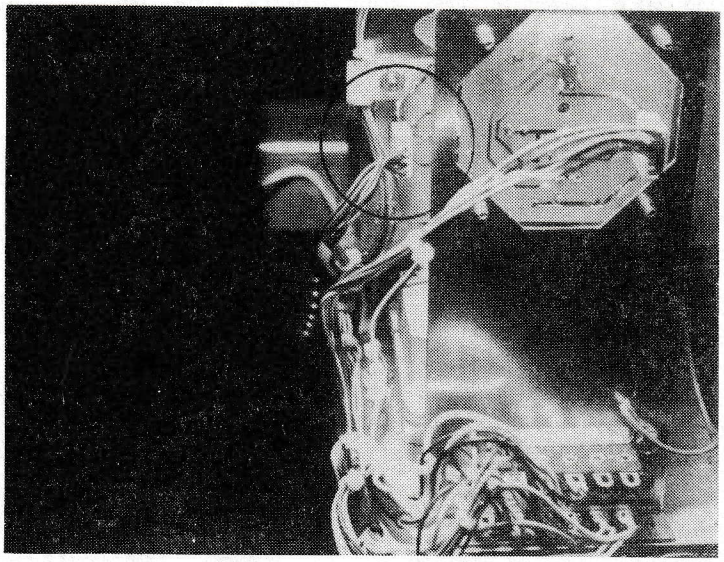
IF THE ENCODERS DO NOT RESPOND TO THE CARD TEST THE PROBLEM COULD BE A DEFECTIVE ENCODER OR A PROBLEM FURTHER DOWN THE LINE TO THE MAIN PROCESSOR BOARD...IN 90% OF THE TIME IT WILL BE THE ENCODER....IF YOU HAVE ANOTHER ONE...ALL ENCODER BOARDS ARE THE SAME PART # MEB 1000 YOU CAN TRY REPLACING THE BOARD AND TEST AGAIN IF THE PROBLEM APPEARS NOT TO BE IN THE ENCODER BOARD THEN SEE PHOTO'S BELOW FOR FURTHER TESTS....

IF YOU EXAMINE THE CORD WHICH PLUGS INTO THE X-HOME ENCODER YOU WILL SEE..3 WIRES. RED +5 volts, GREEN -GROUND, BLUE SIGNAL WIRE.

IF YOU SHORT THE GREEN WIRE TO THE BLUE WIRE...THAT IS THE SIGNAL GOES TO GROUND...PHOTO (4) YOU SHOULD SEE THE HOME SIGNAL YOU ARE TESTING GO TO -YES. IF IT DOES IT PROVES THAT THE PROBLEM LIES IN THE ENCODER BOARD AND OR THE CONNECTION.
THE SIGNAL WIRE ON THE Y-HOME ENCODER IS WHITE WITH BLUE STRIPE.

IF THE HOME DOES NOT GO TO -YES OR IF IT REMAINS -YES THEN PROCEED TO THE NEXT TEST.



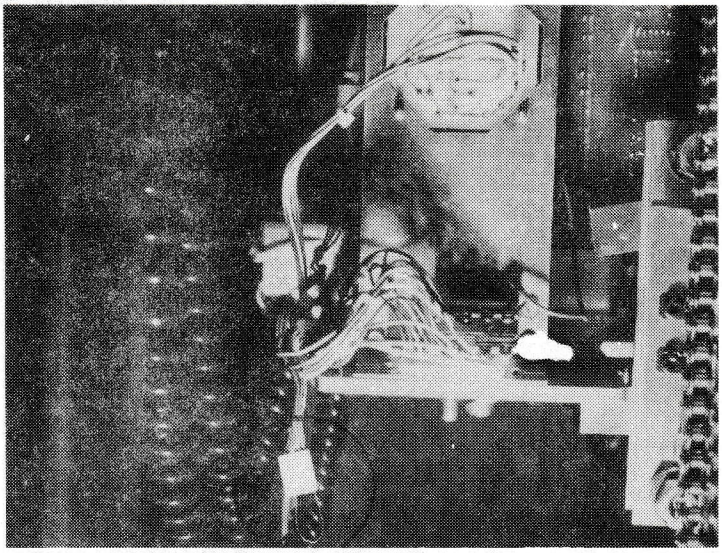


PHOTO (4)

plug in rear of x-home encoder

x-home encoder plug pulled and signal wire shorted to ground

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IF YOU EXAMINE THE MAIN PROCESSOR BOARD SEE PHOTO (5) YOU WILL SEE THE J4 CONNECTOR IN THE REAR OF THE BOARD. THIS IS THE CONNECTOR OFF BY ITSELF TO THE LEFT.

THIS CONNECTOR HAS 16 PINS. ONE OF THE 16 PINS IS CUT SHORT AND ACTS AS A KEY TO BE SURE THAT THE PLUG CANNOT BE INSERTED WRONG. THE FIRST PIN IS THE GROUND PIN = TO THE GREEN WIRE. THE 8TH PIN- DON'T FORGET TO COUNT THE SHORT PIN- IS THE SIGNAL PIN FOR THE -X HOME. IF THE HOME DISPLAY SHOWS -YES- THEN WHEN YOU PULL THE J4 PLUG THE SCREEN SHOULD SHOW -NO IF IT DOESN'T THE MAIN PROCESSOR BOARD IS DEFECTIVE.

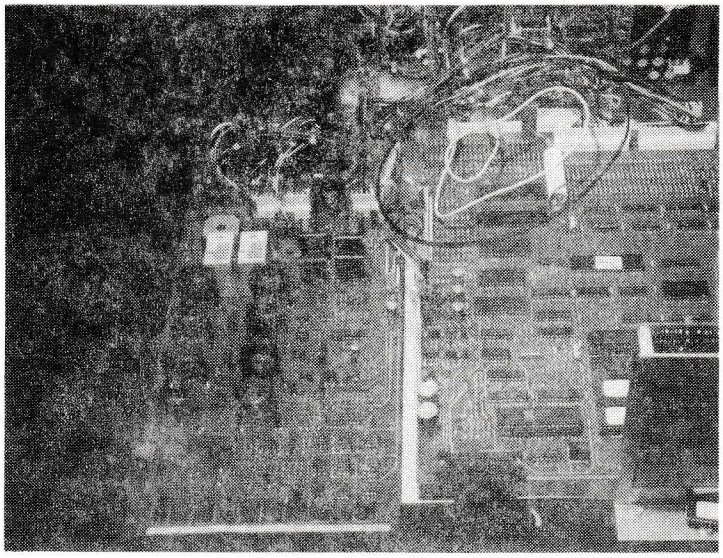

PHOTO (5)
showing pins #1 and #8 jumpered together on the J4 connector

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IF THE DISPLAY NOW SHOWS -NO THEN YOU WILL HAVE TO LOOK FOR A SHORT TO GROUND IN THE CABLE SET. IF THE DISPLAY WAS CONTINULY SHOWING -NO THEN TRY SHORTING THE 1ST AND 8TH PINS TOGETHER SEE PHOTO (). THIS SHOULD PRODUCE A -YES- ON THE DISPLAY IF IT DOES THEN THE PROBLEM IS IN THE CABLE YOU WILL HAVE TO LOOK FOR A DEFECTIVE CABLE...BROKEN LEAD OR MORE LIKELY A BAD CONNECTION IN ONE OF THE PLUGS. IF THE DISPLAY STILL DOES NOT SHOW YES THEN THE PROBLEM LIES IN THE MAIN PROCESSOR BOARD.

ALL OF THE ABOVE IS TRUE FOR THE -Y HOME EXCEPT THE PINS TO TEST ARE PIN #1 AND PIN # 10

## ERROR CODE PRINTOUTS

ACTUAL CODE # SEQUENCE PRINTED ON PAPER RECIEPT PRIOR TO SHUTTING DOWN FOR AN ERROR

---

renting x-home defective
reading -yes- always

157, 128, 126, 114, 115, 116, 109, 104,
103, 102, 101, 114, 115, 114, 114, 114,
114, 114, 114, 114, 114, 114- 114, 114,

renting y-home defective
reading -yes-always

158, 126, 114, 115, 116, 109, 104, 103,
102, 101, 114, 115, 114, 114, 114, 114,
114, 114, 114, 114, 114, 114, 114, 114,

renting y-home defective
reading -no- always

124, 150, 117, 114, 115, 104, 103, 102,
101, 124, 150, 117, 114, 115, 104, 103,
102, 101, 124, 150, 117, 114, 115- 116,

renting x-home defective
reading -no-always

124, 150, 117, 114, 115, 104, 103, 102,
101, 124, 150, 117, 114, 115, 104, 103
102, 101, 124, 150, 117, 114, 115, 104,

**VIDEO VENDOR**
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #8

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

AUGUST 20, 1986
SUBJECT: IMPROVING SECURITY OF THE VIDEO VENDOR

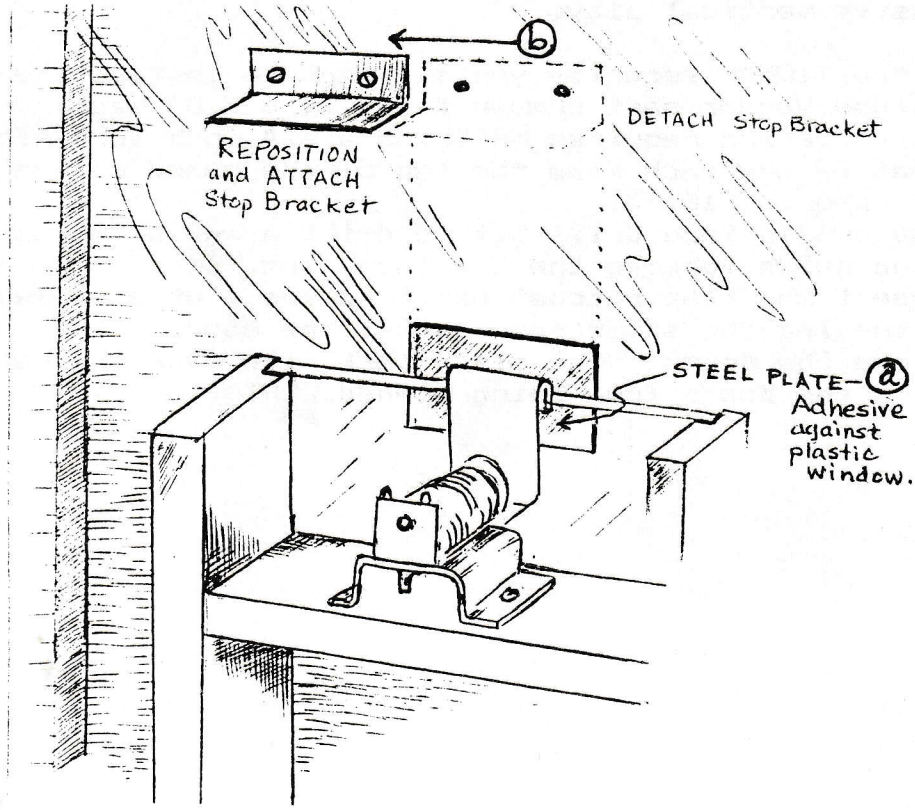
During the past several months, we have been checking the Video Vendor design in order to make it as tamper proof as possible. During these tests, two areas of possible weakness were discovered:

A. THE ACCESS DOOR
B. THE LARGE LEXAN TAPE STORAGE DOORS

In order to improve the security of your machine, it will be necessary for you to follow the directions below:

A. THE ACCESS DOOR LOCK:
   1. Open the large lexan door (tape storage compartment) and the large rear door.
   2. See FIGURE 1: Rear view of access door top.
   3. The enclosed stainless steel plate has a special high strength adhesive applied to the lower half of one side. (Be careful, due to its thinness the steel plate has sharp edges.)

FIG. 1 REAR VIEW OF ACCESS DOOR TOP



4. Peel off the adhesive protective paper and insert the plate between the plastic access door and the cabinet wall, adhesive side toward the plastic door, centered on the latch. See FIG. 1a. Position the plate so that the adhesive layer is just below the top of the plastic door and is approximately level. Now press the plastic door against the steel plate. Hold firmly for five seconds.

5. Remove the two screws from the upper stop bracket. Move bracket towards the command center (tv screen). Position it to clear the new protector plate. (Remember, the door has some slide or twist play--make sure to allow for this movement.) Secure bracket with the two screws. See FIG. 1b.

6. You will be able to preform step 4 working from either the large lexan door entry or the large rear door entry, and step 5 through the large rear door.

7. Test the machine for proper operation, access door latching and sensor switch activation.

B. THE LARGE LEXAN TAPE STORAGE DOORS:

Some Vendors have excessive vertical play in the large lexan doors. To reduce this play, it will be necessary to insert two pan head sheet metal screws into the upper wooden guide track.

1. Slide the right door open and screw two screws into the upper surface of the wood track at the positions shown. See FIG. 2.

2. Adjust the depth of these screws until the door will slide back without interference yet long enough to have taken up sufficient play.

3. Repeat for the left door on its track.

NOTE: Not all machines will require this change, only those with excessive vertical play.

4. For ADDITIONAL security you may want to install the slide lock: Video Vender part number X-129 at $25.00 each.

a. Installation requires drilling a 3/4 inch long slot approximately one inch from the top of the guard channel on the inner door. FIG. 3.

b. Use a 3/16 inch drill bit to drill a row of three connecting holes forming the 3/4 inch slot.

c. Insert the flat ratchet bar into the slot as shown, and tighten the locking set screw against the door.

d. Close the doors. The slide lock fits over the ratchet preventing the doors from being opened. FIG. 4.

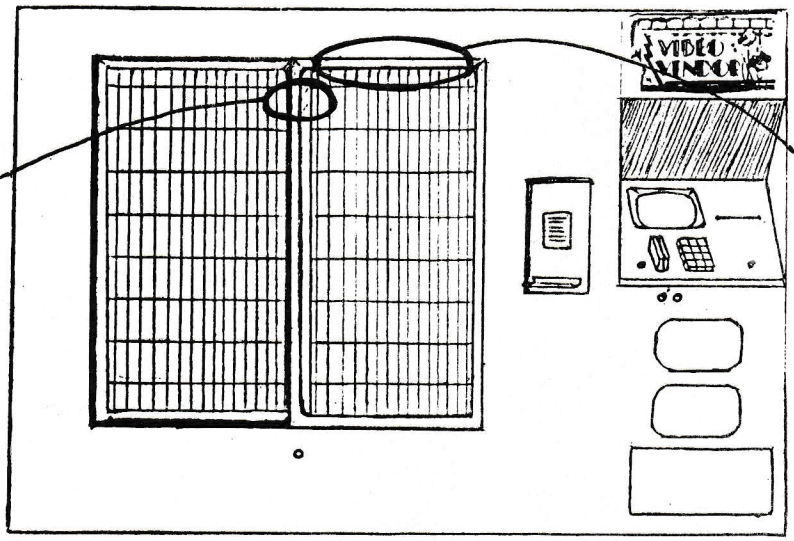



FIG. 2

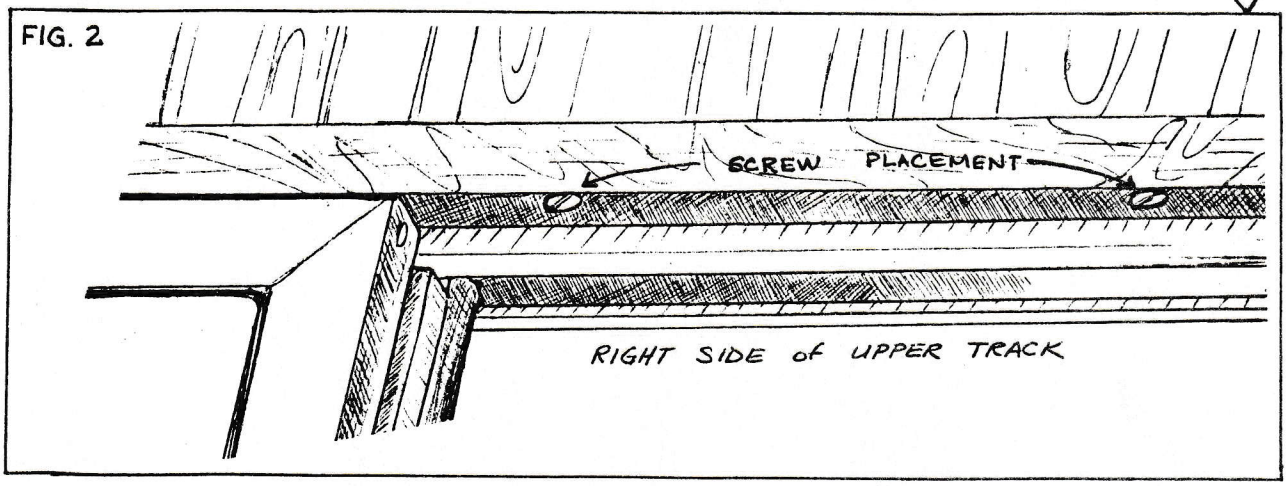



FIG. 3
DOORS OPEN

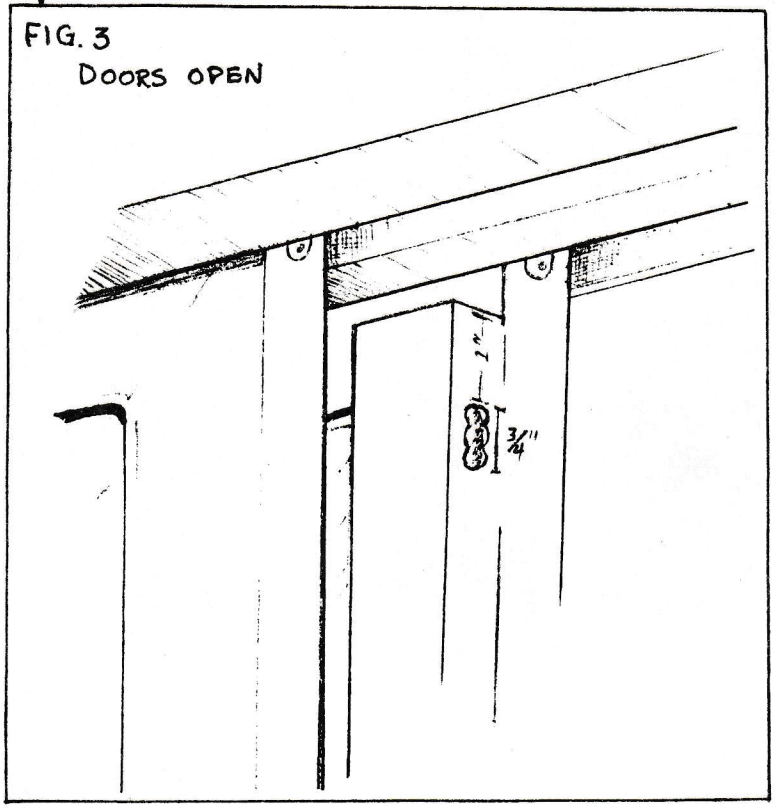
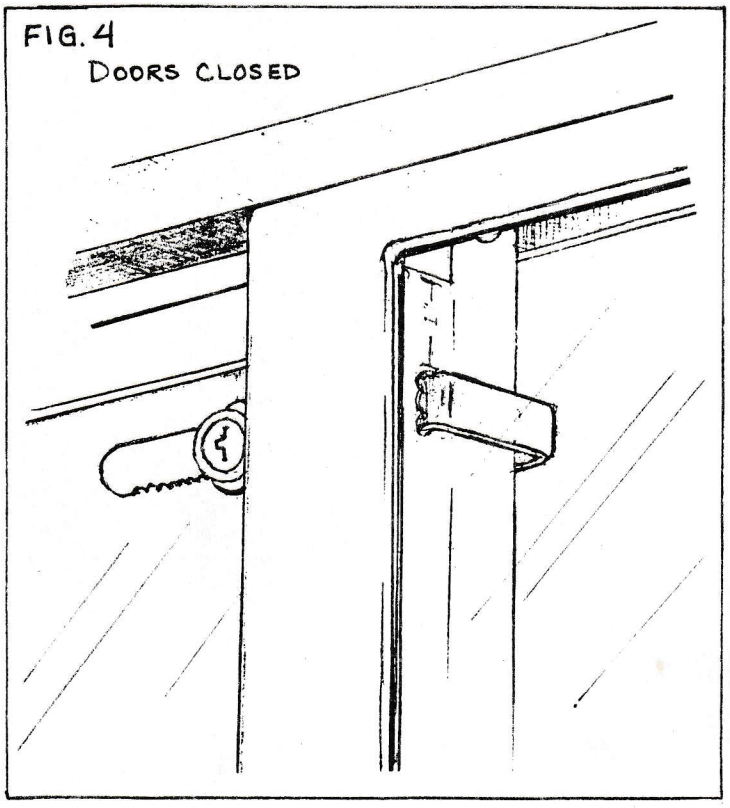



FIG. 4
DOORS CLOSED

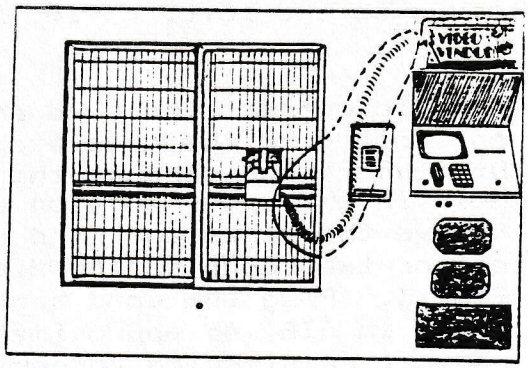


**VIDEO VENDOR**
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #9

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

SEPTEMBER 22, 1986
SUBJECT:
TRANSPORT COVER COILED CORD



The long coiled cord used on the tape transport can get jammed at the access door, under certain conditions, and cause the Vendor to blow the fuse on the motor controller board. It would be beneficial to check the cords on all Vendors and correct the hanging of the cord if it is found to be incorrect.

The procedure for checking the cord is as follows:

A. Enter service feature "19" Diagnostics.
B. Open the lexan doors and cheat the interlock switch so the transport can be run with the doors open.
C. Run the transport up one foot and then to the left while observing the coiled cord unfurl.
D. Move the transport back to the right, then up another foot and left again. Repeat this procedure until the transport is about one foot above the access door.

There are only three ways the cord can be observed hanging. Two of the ways are incorrect and should be fixed. The correct hanging of the cord is as follows:

1. As you face the front of the machine in feature 19 observing the cord while you run the transport up and to the left, the cord should form a "J" shape. The long leg of the "J" should be formed by cord coming straight down to the right of the access door on the inside of the wooden cabinet. (FIG. 1) As the transport is moved left, the cord should move smoothly, not catching on the steel transport beam (FIG. 2) or on the access door itself. (see note: Fig. 1)

2. Problem: If the cord coils to the left, and has to cross over itself as the transport moves to the left, it is hung wrong and should be corrected. (FIG. 3)

3. Problem: If the cord has the long leg of the "J" hanging toward the back of the cabinet, it is hung wrong. It will get caught on the steel transport beam when the transport moves to the left. (FIG. 2)

To correct the cord positioning, run the transport up about one foot from the home position. Shut off the main power. Disconnect the cord at the top of the cabinet behind the round hole in the upper portion of the wood cabinet. (See FIG. 4) Remove the screw and cord clamp. If necessary, rotate the cord one or two turns in the direction that will remedy the problem in FIG. 3. Plug the cord back in and reclamp it in the position shown in FIG. 4: approximately 2 1/2 inches from the front of the cabinet reinforcing corner block and 2 3/4 inches from the top of the cabinet.

The connection at the retriever end of the cord should be made as shown in FIG. 5a. If it is connected as in FIG. 5b, remove the transport cover, loosen the cord clamp, turn the cord to the proper position and retighten the cord clamp.

Now, retest the cord motion to see if you have completed the rehanging of the cord correctly. If not, retry until it hangs correctly.

FIG. 1

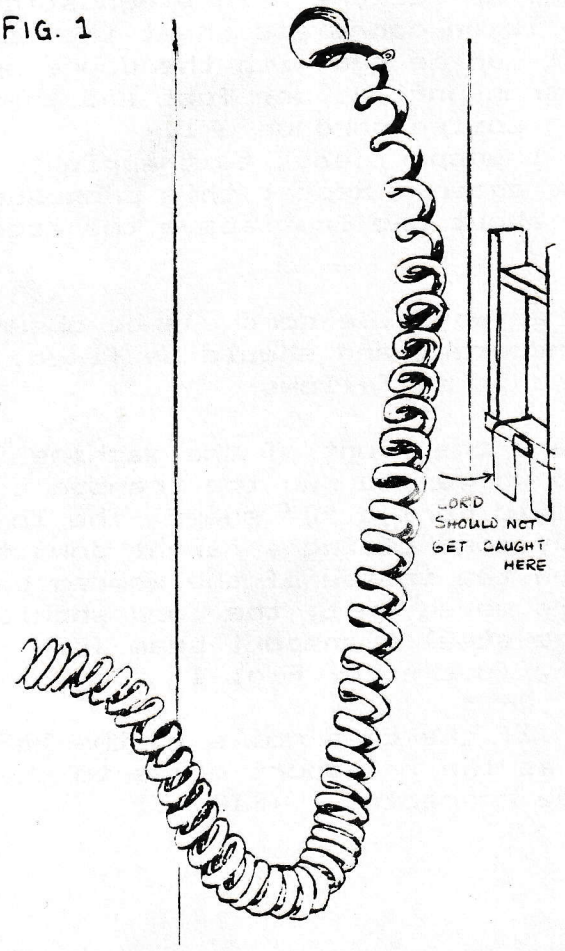


FIG. 2

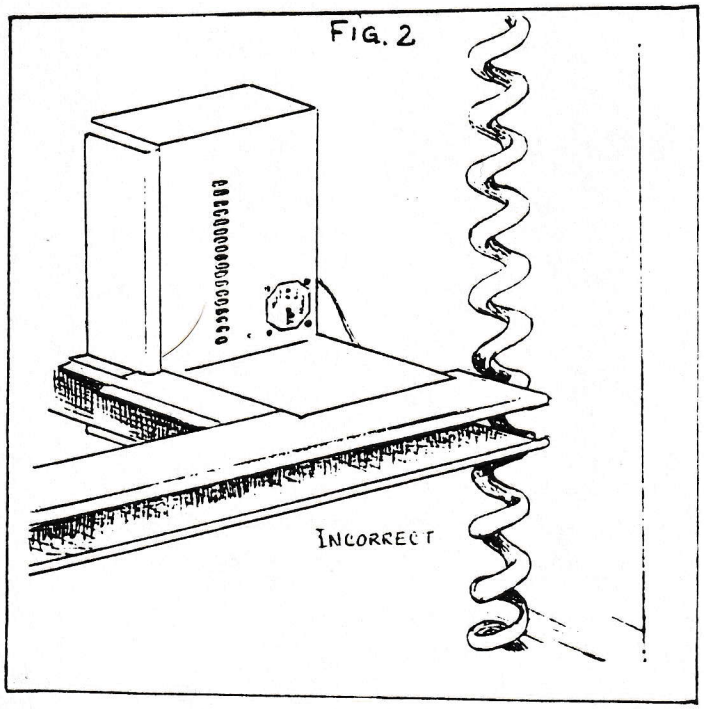



FIG. 3

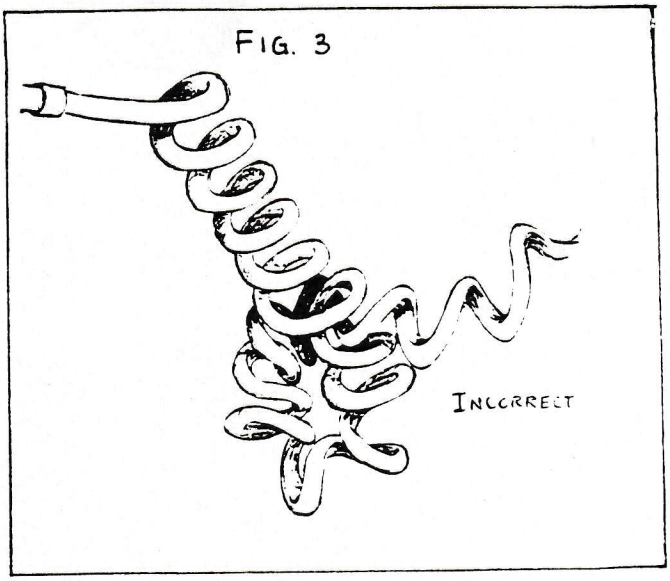



FIG. 4

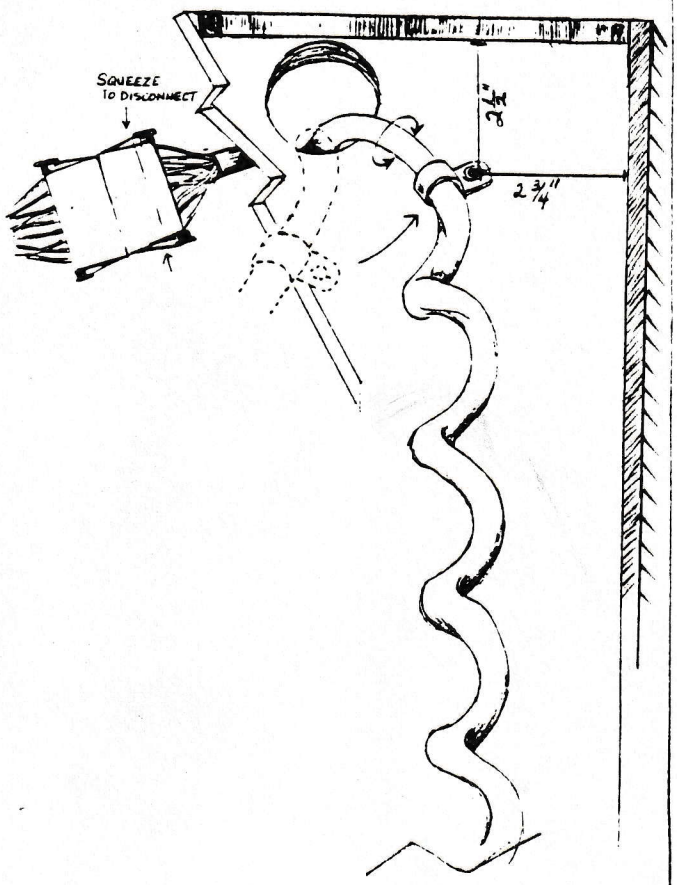
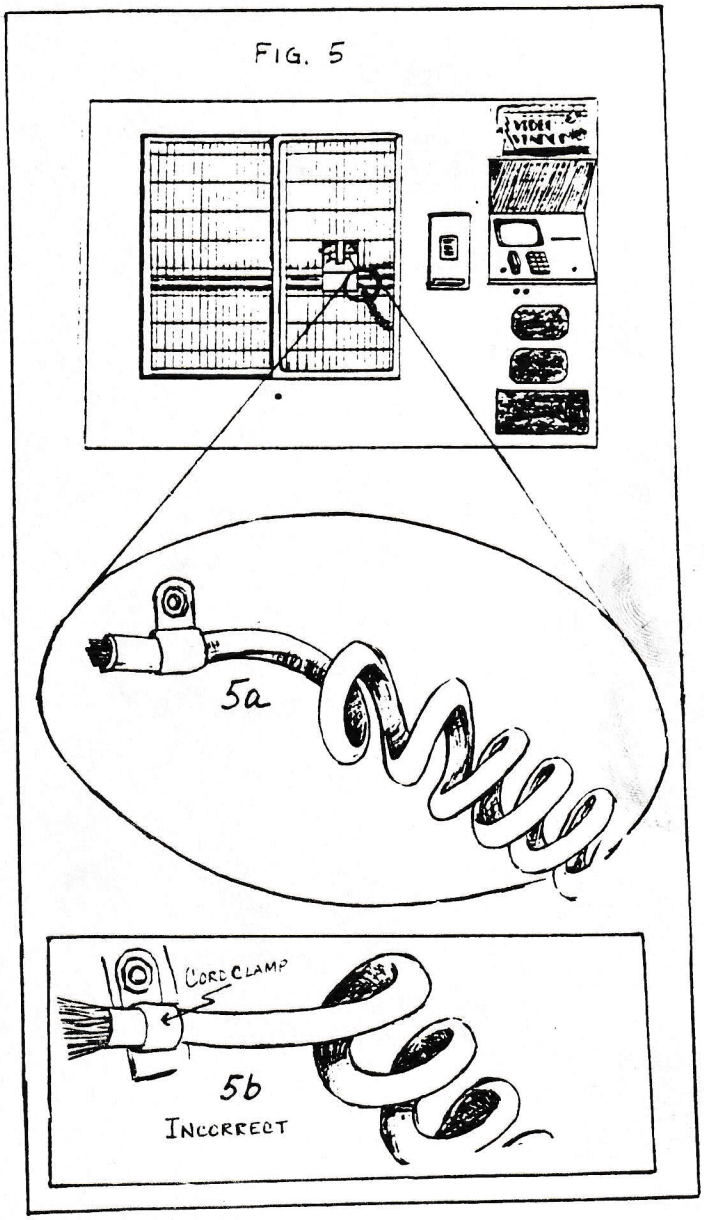


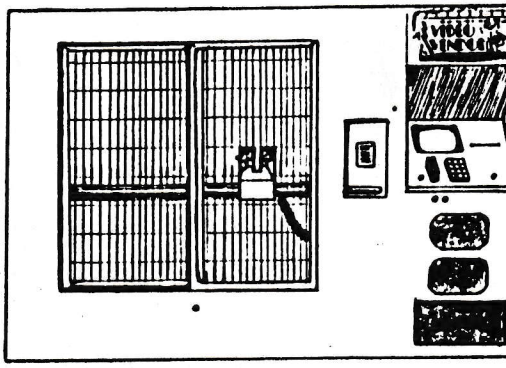

FIG. 5



VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #9a.

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



AUGUST 7, 1987
SUBJECT: AVOIDING COILED CORD PROBLEMS

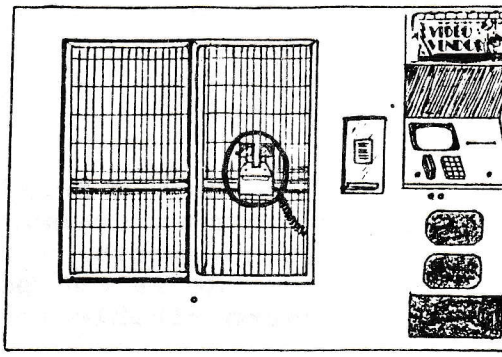
This bulletin is to alert you to what we have found to be a primary cause of coiled cord problems.

Whenever the retriever is removed from the horizontal rail and turned upsidedown for repairs, it is possible that turning the retriever over again could cause tangling of the coiled cord. For example, while adjusting or replacing the grabber motor drive belt (See Service Bulletin #2) care should be taken not to rotate the retriever before reattaching it to the horizontal rail. Rotating the retriever twists the coiled cord and will cause a jam at the access door.

Be careful to check the hanging of the coiled cord (See Service Bulletin #9) after any adjustment involving the removal of the retriever from the horizontal rail.

VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #10

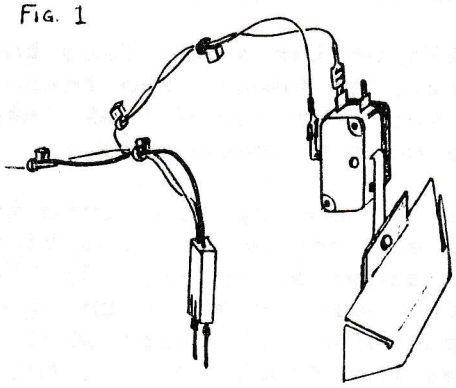


Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

SEPTEMBER 8, 1986

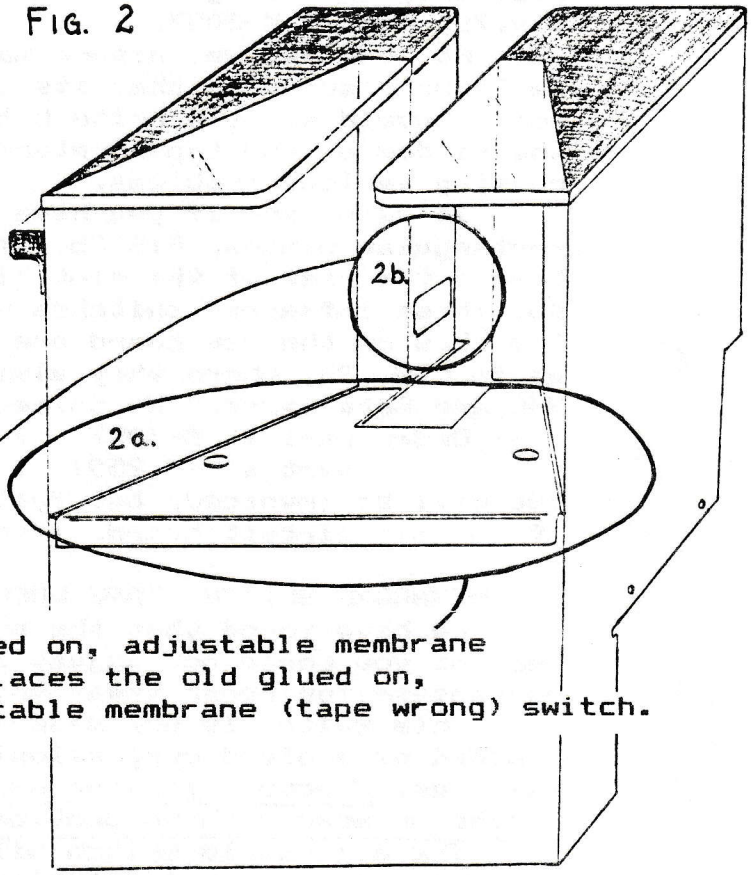
SUBJECT: TRANSPORT COVER CHANGES
1. NEW TAPE TOP SENSOR
2. IMPROVED MEMBRANE SWITCH

FIG. 1



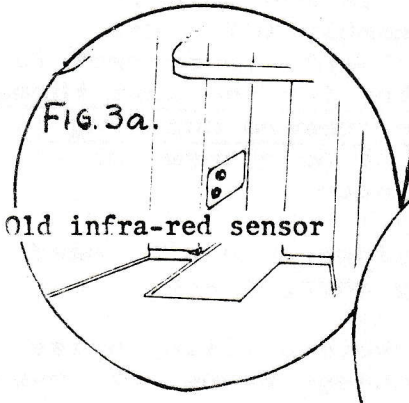
This mechanical sensor is replaced by an improved, infra-red tape top sensor.

FIG. 2



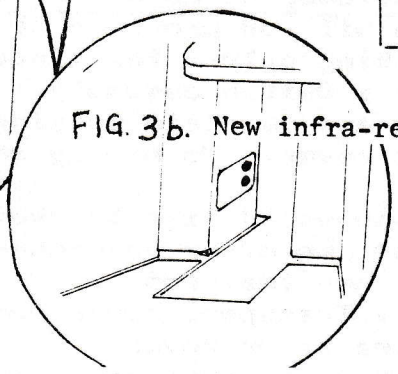

New, bolted on, adjustable membrane plate replaces the old glued on, non-adjustable membrane (tape wrong) switch.

FIG. 3a.



Old infra-red sensor

FIG. 3b. New infra-red sensor



Either the mechanical sensor or the infra-red solid state sensor with the LEDs in the position shown in 3a (closest to the lexan doors), should be replaced with the newest version of the tape top sensor. It has LED (light emitting diode) sensors in the position shown in 3b (closest to the tape shelves).

On the previous page, you were introduced to our new transport cover. Included are a number of new and valuable improvements.

As is our policy, we design all changes to be easily retro-fitable to all of our Video Vendors.

1. INFRA-RED TAPE TOP

This new, solid state switch eliminates the mechanical adjustment occasionally required due to customer tampering. If you wish to replace your mechanical switch (FIG. 1) with the new one, the connecting cable (included) will also need to be replaced, involving some soldering. The cost of the kit is $44.79, part # K-3057.

For awhile, we shipped machines with an infra-red tape top. We later discovered that its LEDs (positioned toward the lexan doors) would see the white hub on Beta tapes or would look into the window on VHS tapes returned upside down or backwards, causing various problems.

To determine if you have this type of sensor, look into the rectangular window, FIG 2b. If the LEDs are angled and positioned toward the rear of the slot (lexan door side) as in FIG. 3a, you do. These infra-red switches will now be replaced at no charge. The LEDs on the new board are positioned toward the tape shelves as in FIG. 3b, where they always look at the front edge of both VHS and Beta tapes. No soldering or cable changes are necessary.

Order part # A-3057 : Switch circut board
part # 1A-2591 : Mounting bracket.

You will be invoiced, but full credit will be allowed upon return of the old circuit board. (You pay the shipping charges.)

2. MEMBRANE SWITCH (TAPE WRONG)

We have found that the switch is almost indestructable, but because you could not adjust its sensitivity in the field to compensate for rough treatment by customers, it could fail.

This switch is now made as a bolted assembly (FIG. 2a) instead of a glued one, allowing field adjustments to correct for failures. However, if your switch has operated for the past three months or more with no problems, we DO NOT recommend changing it.

The adjustable switch will be provided at no charge and adjusting it is simple, taking only a few minutes.

Order part # K8B-787 : Switch assembly.

Following the instructions and template provided, you will need to drill two holes in your cover. No wiring changes are involved.

For those customers who would like to avoid drilling holes to make these modifications, we offer an exchange transport cover complete with all of these new features.

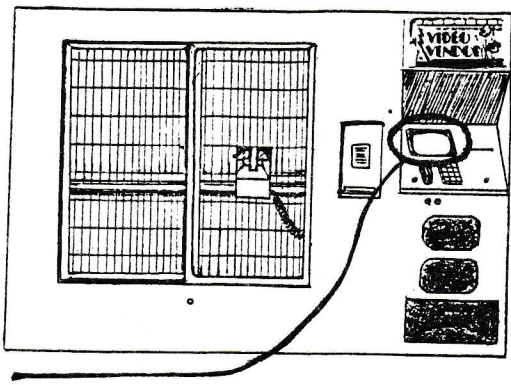
Order part # A-3000 : Transport cover cost 50.00 + shipping charges and your present transport cover.

To install; the old cable is unsoldered and the new one soldered on.

**VIDEO VENDOR**
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #11

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



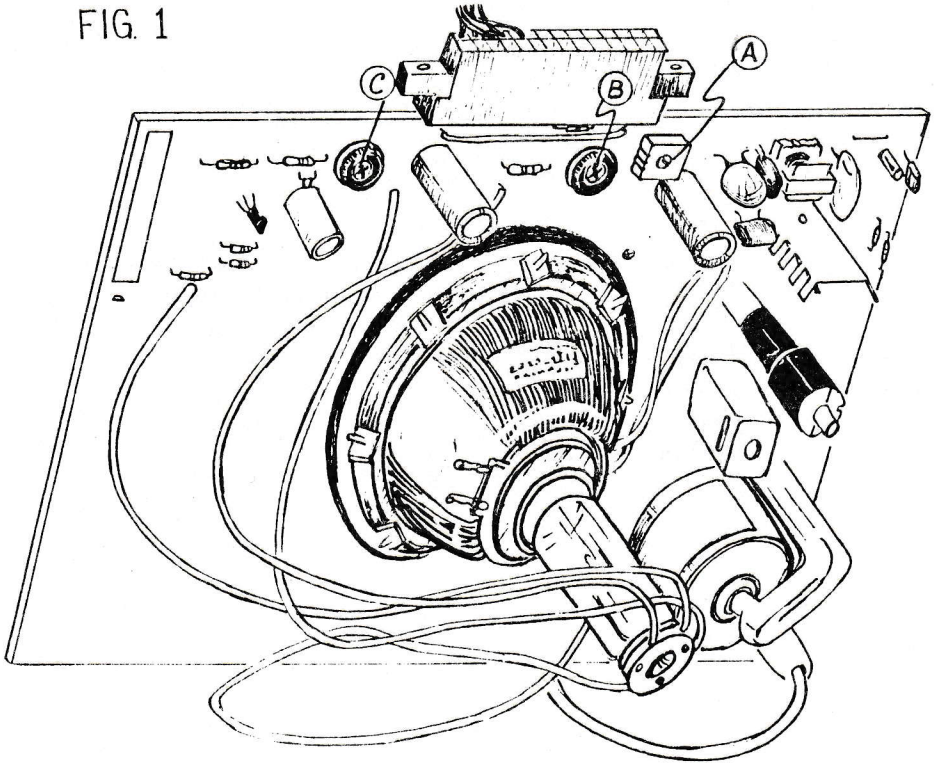

SEPTEMBER 18, 1986
SUBJECT: ADJUSTING THE VIEWING MONITOR SCREEN

To obtain the clearest viewing from your Video Vendor monitor, adjustments can be made on the board behind the screen. Remove the small rear door and locate the video monitor circuit board (FIG. 1). There are three potentiometers (POTS) which control the monitor's visual quality. They are located along the top of the circuit board labeled A, B and C on FIG. 1, and are adjusted by turning with a small screwdriver.

The square, blue pot: "A" controls BRIGHTNESS.
The round, black pot just to the left of "A":
"B" controls CONTRAST.
The other round, black pot to the left of "B":
"C" controls VIDEO GAIN.

| TURN | COUNTERCLOCKWISE | CLOCKWISE |
|---|---|---|
| A | increases overall brightness | decreases overall brightness |
| B | decreases contrast; causes blurring | increases contrast; darkens background |
| C | diminishes sharpness | enhances sharpness |

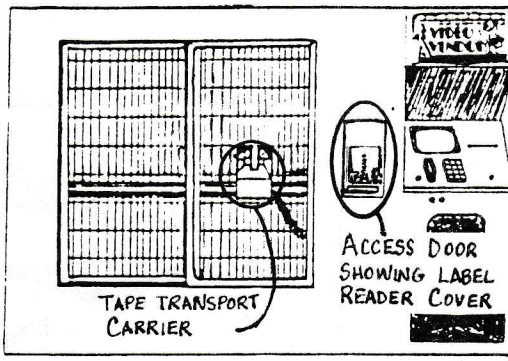
FIG. 1



VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #12

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑




OCTOBER 16, 1986
SUBJECT: CHECKING AND ADJUSTING LABEL READER ALIGNMENT

If your label reader board is CONSISTENTLY assigning incorrect code numbers on movie rentals and returns, it could be due to poor alignment of the label reader to the tape transport carrier. The tape carriage should be aligned in both the vertical and horizontal planes. Check the alignment with the transport in the X-home and access door position, and the transport cover removed (see Fig. 1). Follow the procedure outlined below:

1. Correct vertical alignment is shown in Fig. 2, detail a; with the centerline of the lowest sensor eye 3/8" from the tape carriage floor. To check this measurement, place a 3/8" thick piece of plywood into the carriage. The top of the wood should line up with the center of the lowest sensor (see Fig 3). To correct the vertical alignment, insert shims as described in Fig. 4 (see Note). If the carriage lines up too HIGH, insert a shim at point "A". If it lines up too LOW, insert a shim at point "B". After shimming, recheck the 3/8" measurement.

2. Correct horizontal alignment is shown in Fig. 2, detail b; where the vertical row of sensor eyes is centered along the midline of the tape carriage. If the sensors appear to be left or right of center, the plastic switch interupter (Fig. 5) can be adjusted. If the row of sensor eyes are LEFT of center, loosen the screws and move the plastic interupter slightly to the right. If they are RIGHT of center, move the interupter slightly to the left.

3. Correct tape cassette alignment to the label reader cover is shown in Fig. 6a. The cassette must be pushed flush against the label reader cover. The alignment in 6b is incorrect but the machine can still work because the grabber, positioned low on the tape, will continue to push the tape flush to the label reader cover. To remove the gap, however; open the access door, reach in and PUSH the top of the label reader cover to the position shown in 6a. The alignment in 6c is incorrect and the machine will probably work intermittently because a gap between the top of the cassette and the label reader cover cannot be closed by the grabber. To correct this; open the access door, reach in and PULL the top of the label reader cover to the position shown in Fig. 6a. (You must overcompensate while pushing or pulling the cover in order to bend it sufficiently to remain in the correct position.)

If after making these adjustments your unit continues to assign incorrect code numbers on movie rentals and returns, you may have a defective label reader board and you will need to replace it. The part # is A-2993.

FIG. 1

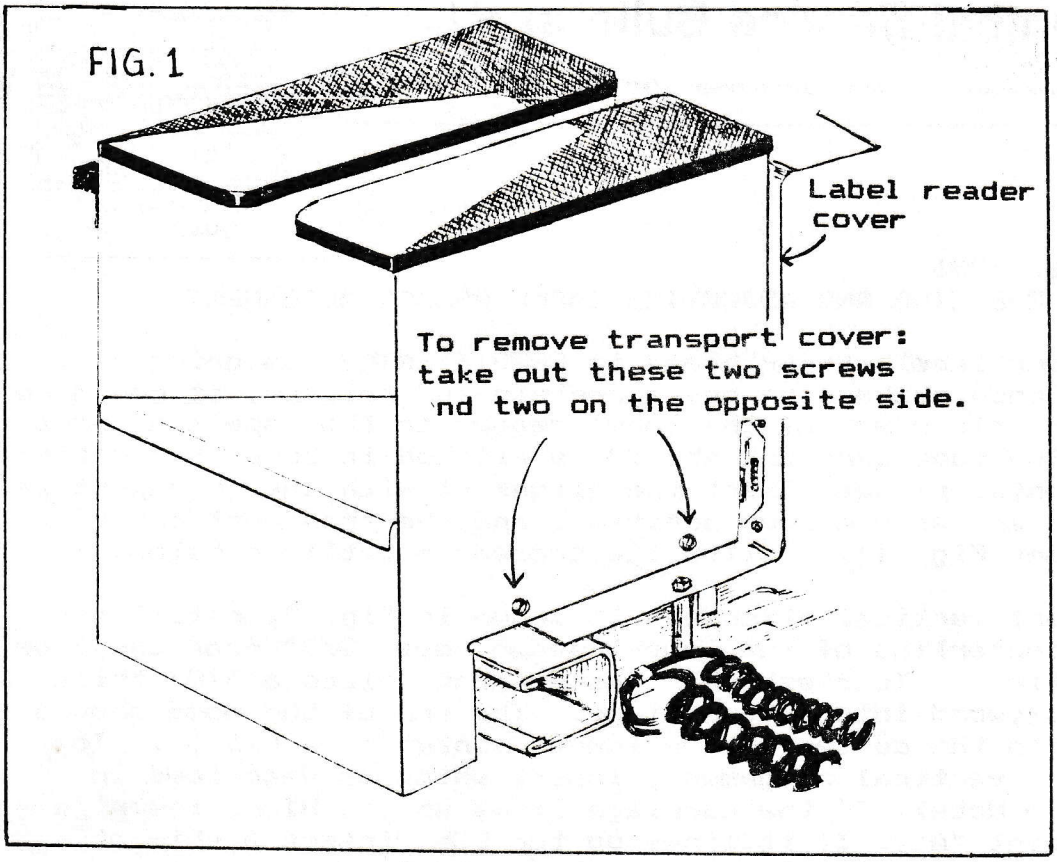



FIG. 2

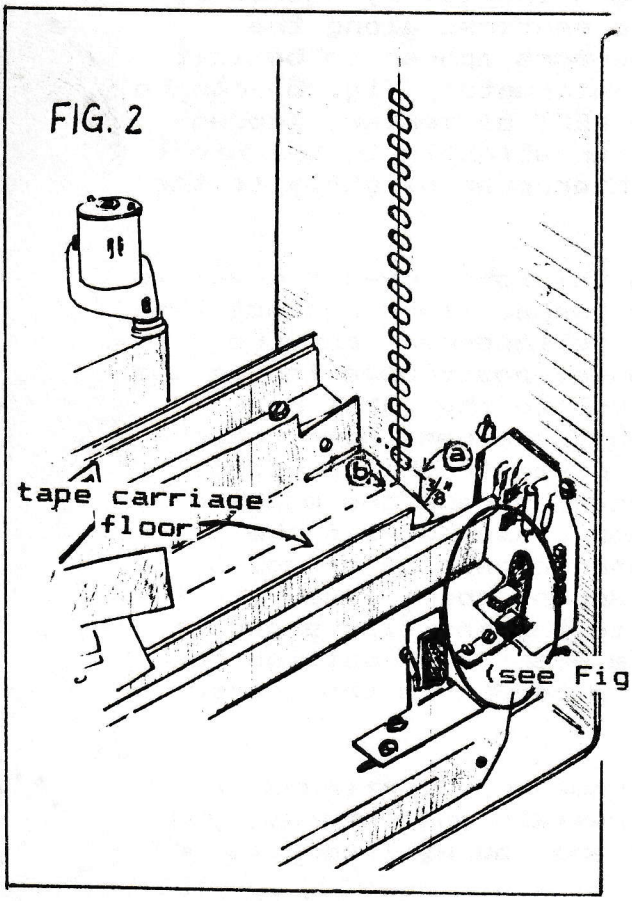



FIG. 3

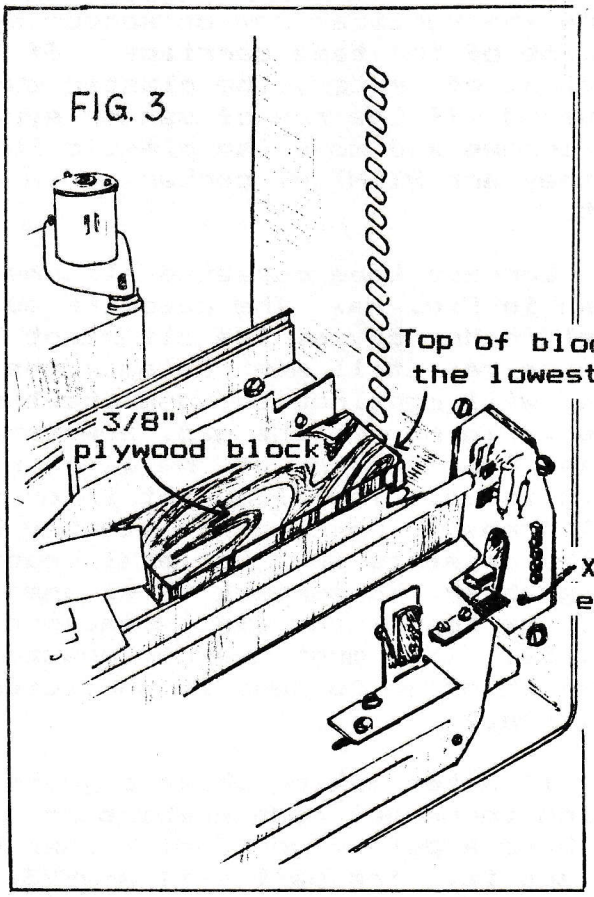


FIG. 4

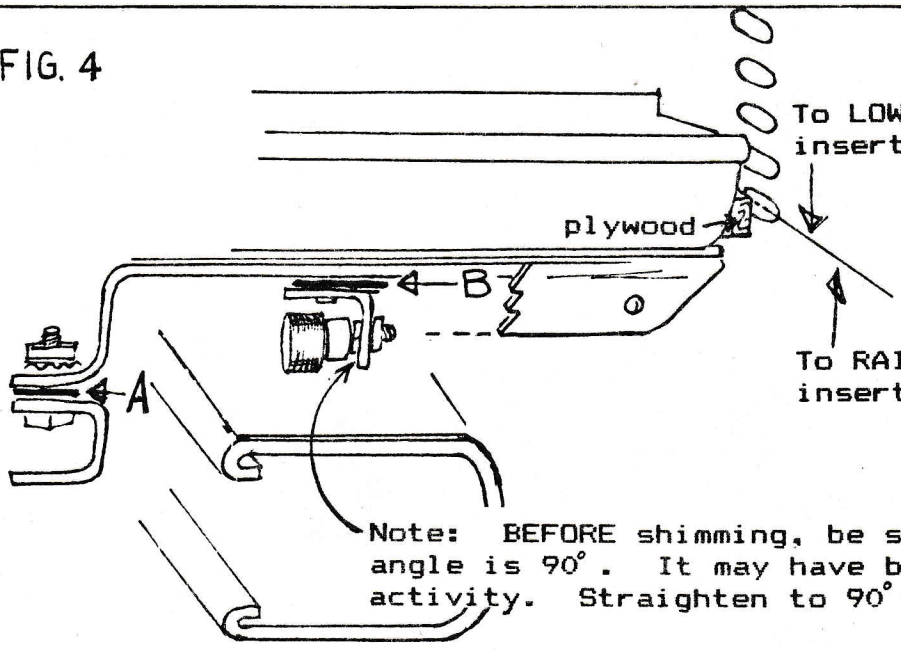



FIG. 5

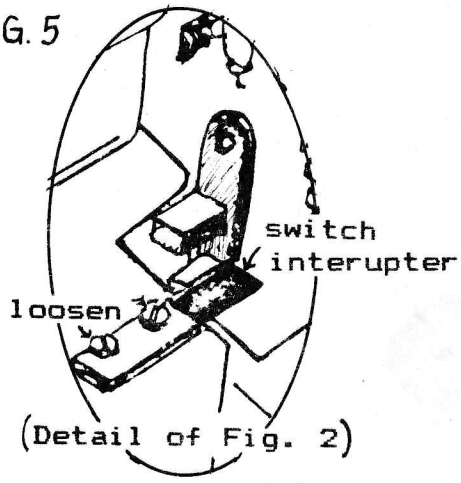
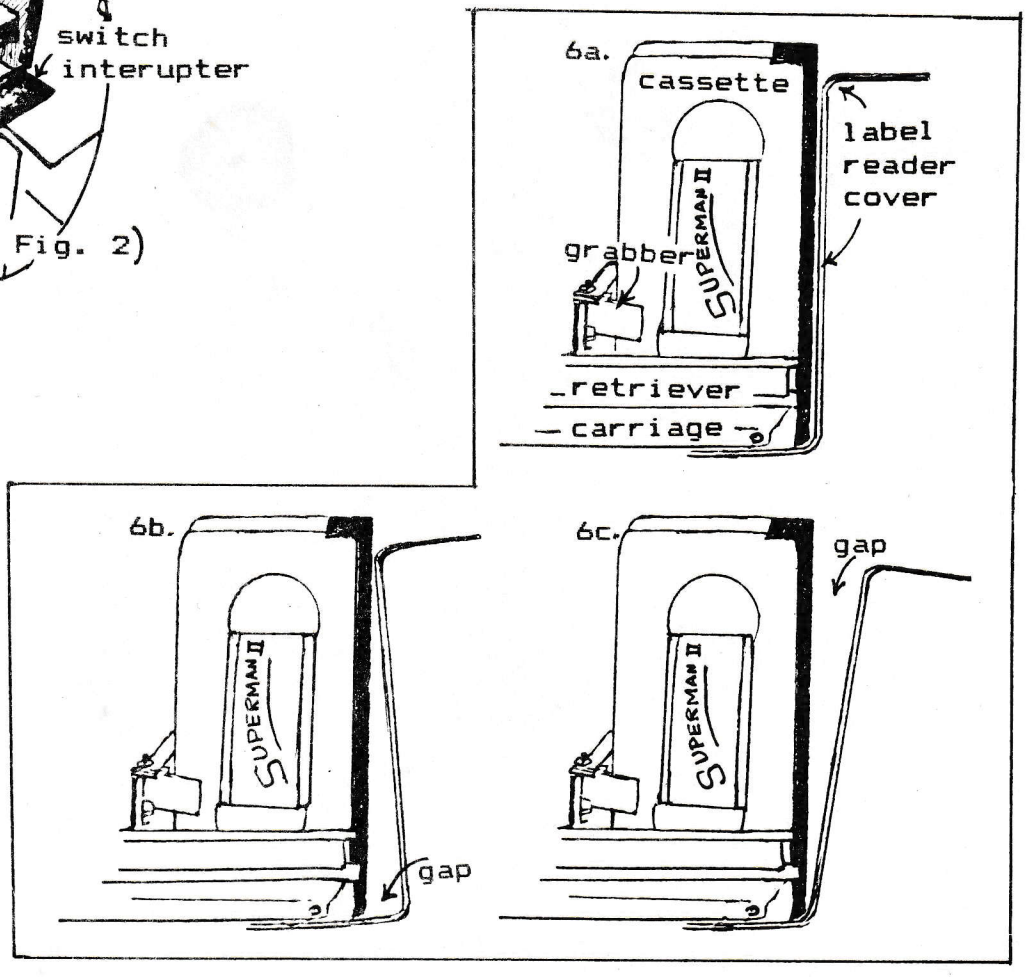


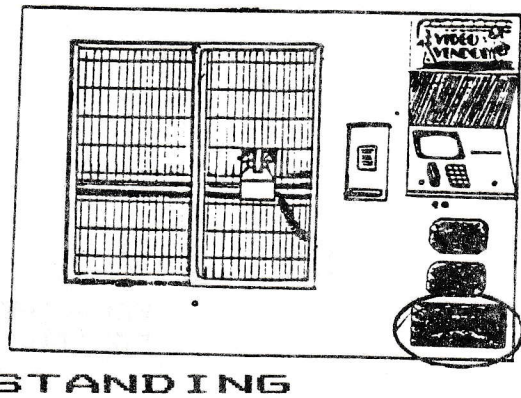

FIG. 6



VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #13

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓




## TESTING FOR AND UNDERSTANDING
THE PROPER
## VOLTAGE READINGS
ON THE
## MAIN PROCESSOR BOARD (MPB-1000)

DESCRIPTION:

THE MAIN PROCESSOR BOARD IS THE BRAINS BEHIND THE VENDOR. THIS BOARD IS LOCATED ON THE RIGHT SIDE OF THE ELECTRONICS COMPARTMENT AND MEASURES APPROXIMATELY 10 x 14 inches. (See Fig. 1)

There are 8 PLUG-IN CONNECTIONS for CABLE ASSEMBLIES to connect to...
THESE ARE LABELED J1-J8

There are 5 TEST POINTS for TESTING THE AVAILABLE VOLTAGES as they come into the board...
THESE ARE LABELED TP1 - TP5

THE RECOMMENDED TEST INSTRUMENT IS....
VIDEO VENDOR'S POCKET-SIZED DIGITAL MULTIMETER

Any quality digital voltmeter can be used but VIDEO VENDOR'S POCKET-SIZED MULTIMETER is the one chosen by our service people and is available from ... VIDEO VENDOR - CURRENT PRICE $63.75.
-When doing these tests keep the POWER ON and THE DIAGNOSTICS SCREEN ON THE MONITOR-

+++ AT ALL TIMES EXERCISE CAUTION: 120 VOLTS AC IS PRESENT IN THE DRAWER WHEN POWER IS ON +++

## TESTING

See Fig.1: TP1 - TP4 are Circled "A". TP5 is Circled "B"

SET YOUR VOLTMETER TO VOLTAGE (DC)

NOTE: Voltages BELOW 1 volt are considered LOW SIGNALS
ABOVE 3 volts are considered HIGH SIGNALS.

YOU MAY NOT GET THE ACTUAL READINGS SHOWN, BUT IF YOUR READING FALLS WITHIN THE HIGH OR LOW RANGE IT IS ACCEPTABLE .

(See Fig. 2)
TOUCH THE:
NEGATIVE LEAD (PROBE) TO TP2 (GROUND)
POSITIVE LEAD TO:

| | AVERAGE READINGS | ACTUAL READINGS |
|---|---|---|
| TP1 | 12 VOLTS DC | 11.96 |
| TP3 | -12 VOLTS DC | -12.01 |
| TP4 | 5 VOLTS DC | 4.89 |
| TP5 | | GROUND |

IF YOUR ACTUAL READINGS FALL 5% ABOVE OR 5% BELOW THESE AVERAGE READINGS, THEN YOU MUST ADJUST THE MAIN POWER SUPPLY. See Fig. 9 "A". Adjust clockwise or counterclockwise while paying CLOSE ATTENTION to your voltmeter.

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## TESTING the J-CONNECTOR PLUGS

For these tests MOVE THE BLACK PROBE (NEGATIVE LEAD) to TP5
Circled (B)

TOUCH AND PROBE WITH THE POSITVE LEAD TO EACH TERMINAL IN QUESTION. THE NUMBER 1 TERMINAL IS ALWAYS THE FIRST TERMINAL CONNECTION ON THE LEFT OF EACH J-SOCKET AND IS MARKED ON THE BOARD. SEE CHARTS ON THE FOLLOWING PAGES:
NOTE: The "missing pin" position on each J-Connector counts when numbering pins.

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## J1 CONNECTOR SOCKET

THIS IS THE RS232 COMMUNICATIONS PORT. A FUTURE BULLETIN WILL DEAL EXCLUSIVELY WITH THIS PORT.

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## J2 CONNECTOR SOCKET

| | ACTUAL READINGS | FUNCTION PERFORMED |
|---|---|---|
| #1 | GROUND | |
| #2 | -12 DC | POWER SUPPLY INPUT |
| #3 | +5 DC | POWER SUPPLY INPUT |
| #4 | +12 DC | POWER SUPPLY INPUT |
| #5 | GROUND | |

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## J3 CONNECTOR SOCKET

See Fig. 3 (outputs to Motor Controller Board)

Use the keypad to create the proper situations for the readings:

| | ACTUAL READINGS | | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|---|
| #1 | 4.89 | DC | ACCESS DOOR LOCKED | FORWARDS COMPUTER INSTRUCTION TO MOTOR CONTROLLER BOARD TO LOCK OR UNLOCK ACCESS DOOR |
| | .099 | DC | IF [1] KEY PUSHED DOOR UNLOCKS | |
| NOTE: Door will only unlock if magnet is in front of reed switch in door frame. | | | | |
| #2 | 4.89 | DC | BEEPER OFF | BEEPER |
| | .099 | DC | BEEPER ON push key [0] | |
| #3 | 4.89 | DC | IF MONEY SOLENOID NOT ON | MONEY-COIN RELEASE |
| | .099 | DC | IF COIN RELEASE SOLENOID CLICKS push key [←] | |
| #4 | 4.89 | DC | NORMAL:NO MOVEMENT OR GOING RIGHT | X-DIRECTION SELECT |
| | .124 | DC | WHEN TAPE CARRIER MOVING LEFT (See #6 below) | |
| #5 | | | NOT USED | KEY |
| #6 | .122 | DC | X-MOTOR ON; CARRIER MOVING LEFT OR RIGHT push key [4] or [6] | X-MOTOR ON |
| | 4.89 | DC | X-MOTOR OFF; NO MOVEMENT | |
| #7 | 4.89 | DC | NORMAL:X-CARRIER NOT IN SLOW SPEED | X-MOTOR SLOW SELECT |
| | .011 | DC | WHEN X GOES INTO SLOW SPEED ON FINAL POSITIONING | |
| #8 | | | | GROUND |
| #9 | 4.89 | DC | WHEN Z-MOTOR NOT ON | Z-MOTOR ON |
| | .118 | DC | WHEN Z-MOTOR IS ON push key [7] or [9] | |

| | ACTUAL READINGS | | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|---|
| #10 | 4.90 | DC | ALWAYS ON | +5 VOLT POWER SUPPLY |
| #11 | .121 | DC | Z-DIRECTION AT REST OR GOING OUT | Z-DIRECTION SELECT |
| | 4.89 | DC | Z-DIRECTION GOING IN<br>push key [9] | |
| #12 | 4.89 | DC | GRABBER OFF | GRABBER SOLENOID |
| | .100 | DC | GRABBER ON<br>push key [3] | |
| #13 | 4.89 | DC | Y-MOTOR OFF or GOING DOWN | Y-MOTOR DIRECTION SELECT |
| | .123 | DC | Y-MOTOR GOING UP<br>push key [2] or [8] | |
| #14 | 4.89 | DC | Y-MOTOR OFF | Y-MOTOR ON |
| | .121 | DC | Y-MOTOR ON<br>push key [2] or [8] | |
| #15 | 4.89 | DC | NORMAL: MOTOR NOT IN SLOW SPEED | Y-MOTOR SLOW SELECT |
| | .122 | DC | WHEN MOTOR GOES INTO SLOW ROUTINE TO FIND SHELF | |

## J4 CONNECTOR SOCKET

See Fig.4

| | ACTUAL READINGS | | CONDITIONS | DIAGNOSTICS SCREEN SHOWS | FUNCTION PERFORMED |
|---|---|---|---|---|---|
| #1-#3 | | | NOT USED | | NONE |
| #4 | | | NO CONNECTION | | KEY |
| #5 | | | | | GROUND |
| #6 | .015 | DC | NO TAPE IN CARRIER | NO | TAPE FRONT (infra-red sensor) |
| | 4.91 | DC | TAPE IN CARRIER | YES | |
| #7 | 3.61 | DC | BODY SENSOR UNCOVERED | NO | BODY SENSOR (infra-red sensor) |
| | .119 | DC | BODY SENSOR COVERED | YES | |
| #8 | 4.12 | DC | WHEN NOT AT HOME | NO | X-HOME SENSOR (infra-red sensor) |
| | .015 | DC | WHEN HOME | YES | |
| #9 | .001 | DC | DOOR OPEN | YES | ACCESS DOOR (small lexan) |
| | 4.85 | DC | DOOR CLOSED | NO | |

| | ACTUAL READINGS | | CONDITIONS | DIAGNOSTICS SCREEN SHOWS | FUNCTION PERFORMED |
|---|---|---|---|---|---|
| #10 | 4.19 | DC | WHEN NOT AT HOME | NO | Y-HOME |
| | .005 | DC | WHEN AT HOME | YES | (infra-red sensor) |
| #11 | 4.92 | DC | TAPE IN CARRIER | YES | TAPE BACK |
| | .082 | DC | NO TAPE IN CARRIER | NO | (infra-red sensor) |
| #12 | .017 | DC | GRABBER CARRIER OUT touching rear limit switch | YES | GRABBER OUT (mechanical switch) |
| | 4.85 | DC | GRABBER CARRIER FORWARD not touching rear switch | NO | |
| #13 | .017 | DC | GRABBER CARRIER FORWARD touching front limit switch | YES | GRABBER IN (mechanical switch) |
| | 4.85 | DC | GRABBER CARRIER REARWARD not touching front switch | NO | |
| #14 | .089 | DC | WHEN ENCODER WHEEL IS BLOCKING | | Y-COUNTER |
| | 4.18 | DC | WHEN HOLE ALIGNS WITH ENCODER | | |
| #15 | .089 | DC | WHEN ENCODER WHEEL IS BLOCKING | | X-COUNTER |
| | 4.18 | DC | WHEN HOLE ALIGNS WITH ENCODER | | |

## J5 CONNECTOR SOCKET

See Fig. 5

These readings are difficult to make with a voltmeter because they are scanning frequency signals.

| | ACTUAL READINGS | | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|---|
| #1 | | | | GROUND |
| #2 | | | NOT USED | |
| #3 | | | NO CONNECTION | KEY |
| #4 | 4.83 | DC | NO CARD IN READER | CREDIT CARD READER |
| #5 | 3.07 | DC | ON CARD READ | READING CR. CARD |
| | 4.83 | DC | NO CARD | MAGNETIC STRIPE |
| | A voltage change of at least 1 volt indicates might be OK. | | | |
| #6 | 4.83 | DC | NO CARD | DETECTING CR. CARD |
| | .002 | DC | CARD PASSING THRU | PRESENCE |

| | ACTUAL READINGS | | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|---|
| #7 | 4.84<br>3.48 | DC<br>DC | NORMAL<br>[4], [5], [6] | KEY PAD KEYS |
| #8 | 3.48 | DC | [7], [8], [9] | KEY PAD KEYS |
| #9 | 3.26 | DC | [1], [2], [3] | KEY PAD KEYS |
| #10 | 3.36 | DC | [←], [0], [ENTER] | KEY PAD KEYS |
| #11 | | | NOT USED | |
| #12 | 4.83 | DC | NORMAL | |
| #13 | .012 | DC | SHORT PULSE HIGH | |
| #14 | .013 | DC | SHORT PULSE HIGH | |
| #15 | | | NOT USED | |

## J6 CONNECTOR SOCKET

See Fig. 6

| | ACTUAL READINGS | | CONDITIONS | DIAGNOSTICS SCREEN SHOWS | FUNCTION PERFORMED |
|---|---|---|---|---|---|
| #1 | | | SHORT DURATION PULSE WHEN ERROR CODE REPORTED ON MONITOR | | |
| | .016 | DC | NORMAL READING | | DIALER |
| | 4.86 | DC | ON ERROR - SHORT PULSE Probably not readable on voltmeters. Try setting meter to AC. A Voltage change indicates system probably OK. | | |
| NOTE: This output currently not used, but destined to operate future phone dialer to advise service dept. that machine is down. This option is currently under development. | | | | | |
| #2 | | | NO CONNECTION | | KEY |
| #3-#5 | | | CURRENTLY NOT USED | | |
| #6 | 4.85 | DC | NO DOLLAR BILL GOES THRU VALIDATOR | Bill Pulse FLICKERS to | BILL PULSE |
| | .016 | DC | AS BILL IS ACCEPTED | Indicate COUNT | |
| NOTE: Pulse duration too short to be read by voltmeter. The number of pulses related to the bill denomination. | | | | | |

| | ACTUAL READINGS | CONDITIONS | DIAGNOSTICS SCREEN SHOWS | FUNCTION PERFORMED |
|---|---|---|---|---|
| #7 | 4.85 DC | NORMAL READING | | LABEL READER |
| NOTE: Pulse information too short to be read on meter. | | | | |
| #8 | 4.85 DC | TAPE NOT IN CARRIER | Tape Top NO | TAPE TOP |
| | .005 DC | TAPE IN CARRIER | Tape Top YES | |
| #9 | 3.49 DC | NORMAL READING- NO KEY PRESSED | | KEY PAD column 4 |
| | 4.85 DC | KEY PRESSED | | |
| #10 | 3.56 DC | NO KEY PRESSED | | |
| | 4.85 DC | KEY PRESSED | | |
| #11 | 3.56 DC | NO KEY PRESSED | | |
| | 4.85 DC | KEY PRESSED | | |
| #12 | 3.54 DC | NO KEY PRESSED Voltage drops 2.7 2.8 | | KEY PAD column 1 |
| #13 | 4.85 DC | NO COIN IN MECHANISM MICROSWITCH WIRE UP | | COIN PULSE |
| | .008 DC | COIN DROPS THRU LOWERS MICROSWITCH WIRE | | |
| #14 | 4.85 DC | NOTHING TOUCHING MEMBRANE COVER | Tape Wrong NO | TAPE WRONG |
| | .006 DC | SOMETHING RESTING ON MEMBRANE COVER | Tape Wrong YES | |
| #15 | .000 DC | EITHER DOOR OPEN | Top and/or Bottom YES | SERVICE DOORS |
| | 4.85 DC | DOORS CLOSED | Top and Bottom NO | |

## J7 CONNECTOR SOCKET

See Fig. 7

Normally cannot be read with voltmeter but these readings are indicative of system normal.

| | ACTUAL READINGS | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|
| #1-#5 | 4.99 DC | NORMAL | PRINTER |
| | .228 DC | PRINTER JAMMED IN ERROR | |

| | ACTUAL READINGS | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|
| #6 | | NO CONNECTION | KEY |
| #7 | 4.93 DC<br>2.06 DC | NOT PRINTING<br>DURING PRINTING | PRINTER |
| #8-#14 | 4.99 DC | PRINTING ON or OFF | PRINTER |

## J8 CONNECTOR SOCKET

(Video outputs)

Normally cannot be checked by voltmeter.

| | ACTUAL READING | | FUNCTION PERFORMED |
|---|---|---|---|
| #1-#6 | | | GROUNDS |
| #7 | | NO CONNECTION | KEY |
| #8-#10 | | | GROUNDS |
| #11 | .300 AC | Should drop slightly with less printing on screen. | COMPOSITE VIDEO OPEN |
| #12 | | | VERTICAL SYNC |
| #13 | | AC SETTING CONSTANT VOLTAGE CYCLE: 18V to 0V. | C SYNC |
| #14 | | | OPEN |
| #15 | | | HORIZONTAL SYNC |

VIDEO OUTPUT can be checked by connecting a monitor to PHONO JACK output holes. Use a shielded coax cable and connect shield to either large hole, center wire to small hole. See Fig. 1, Circled "C". Image should appear on monitor screen if MPB-1000 is OK.

FIG. 1 MAIN PROCESSOR BOARD (MPB-1000)

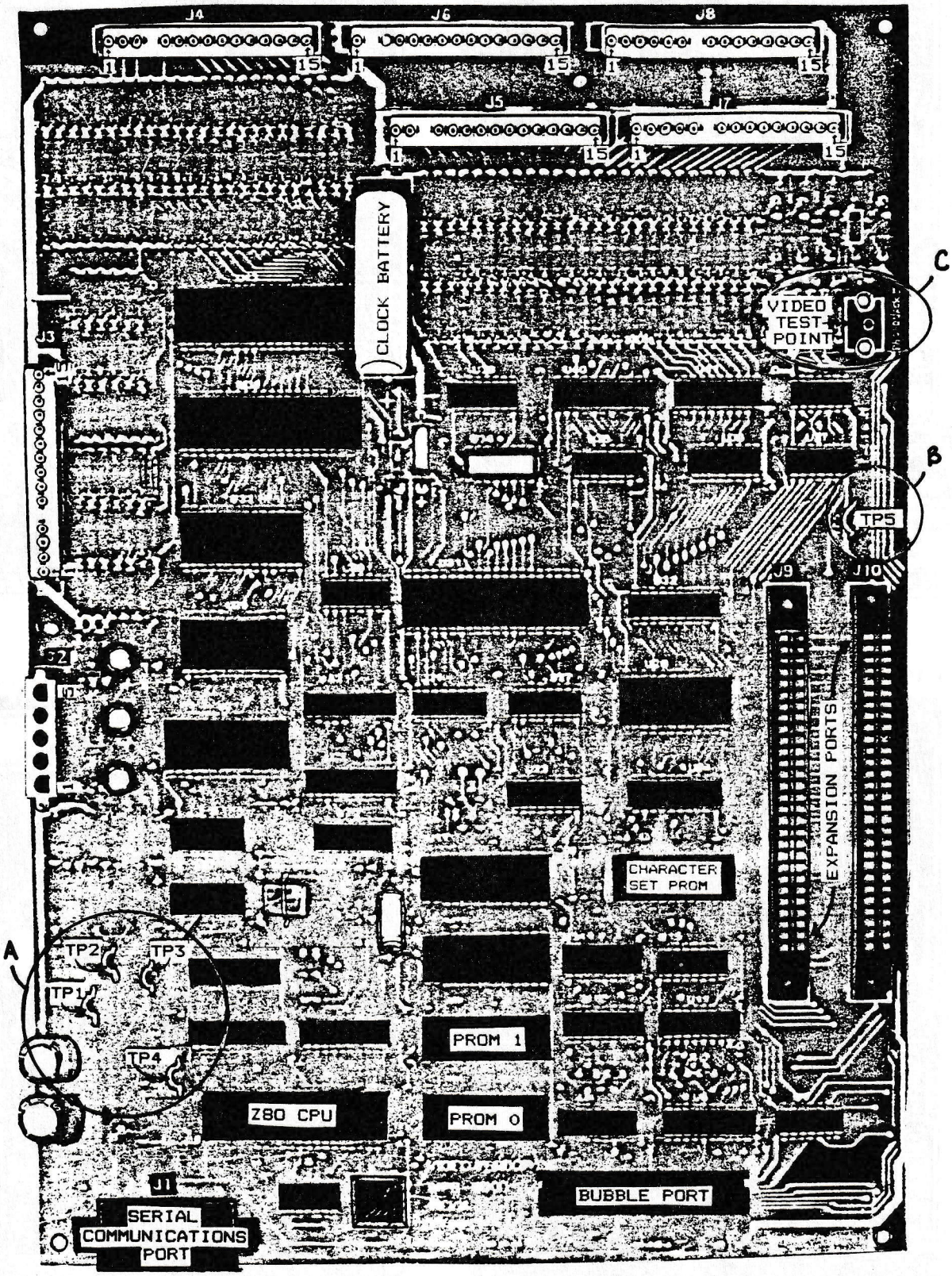


FIG. 2

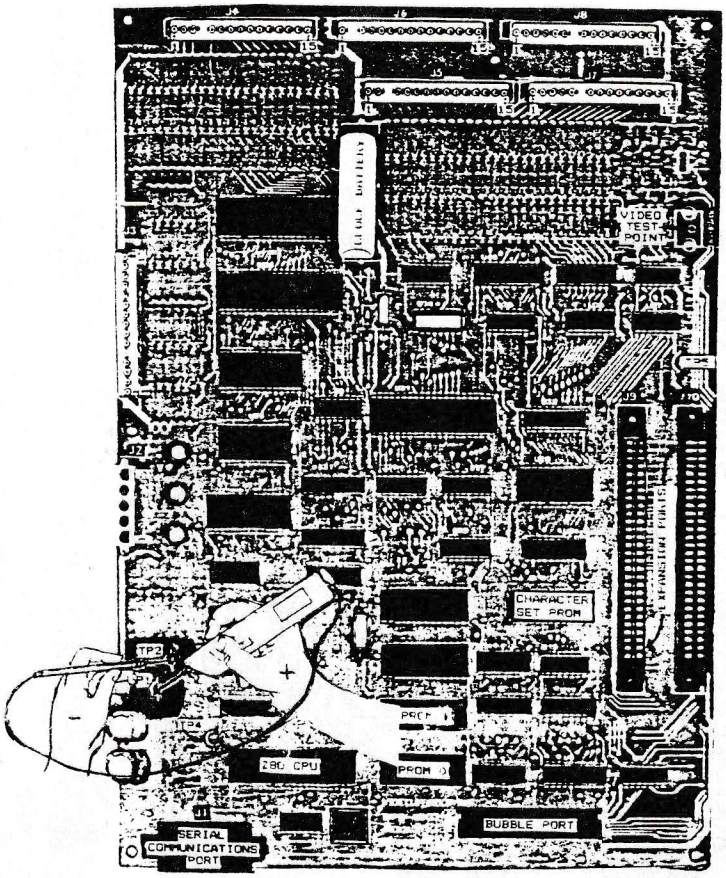



FIG.3

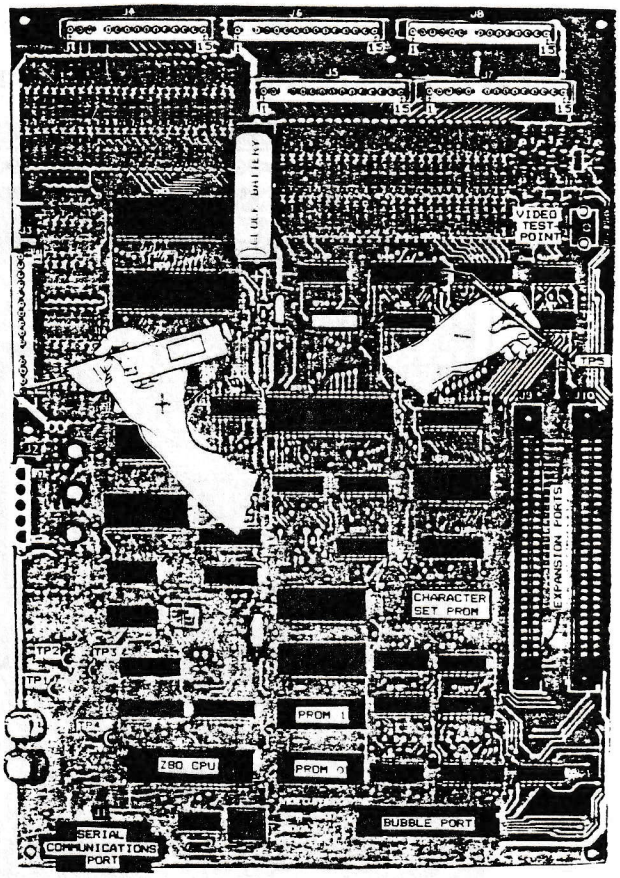



FIG.4

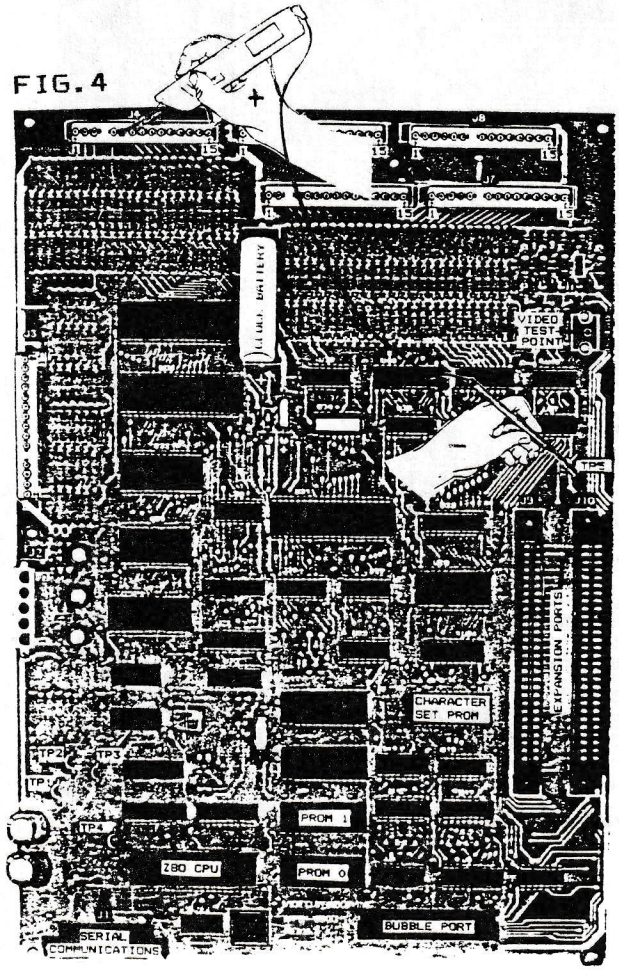



FIG.5

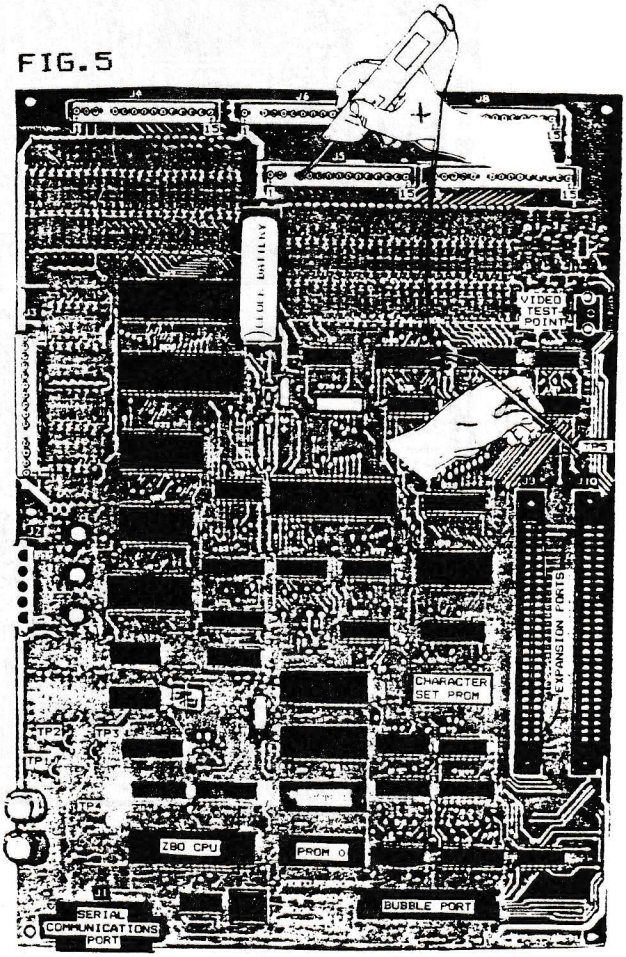


FIG.6

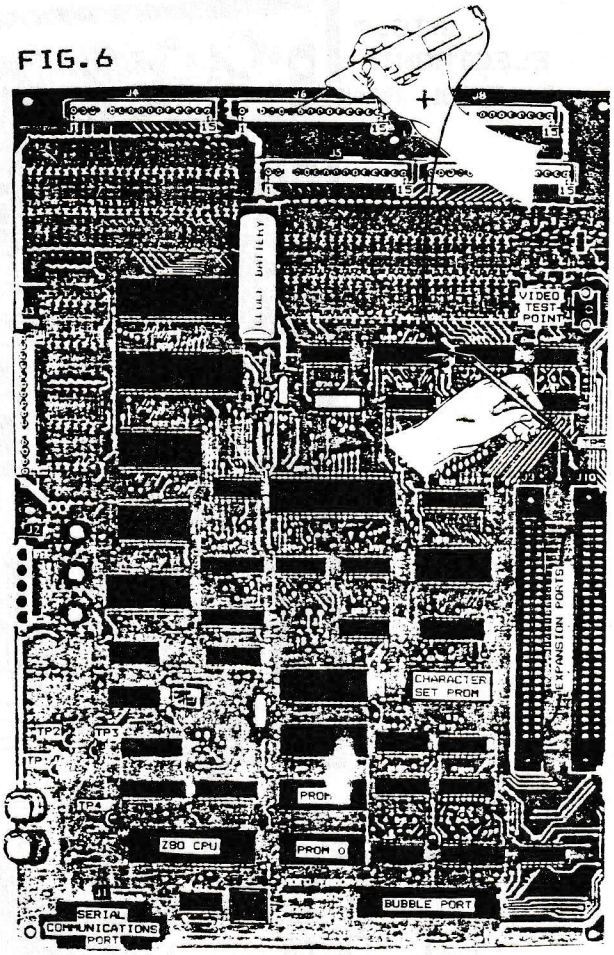



FIG.7

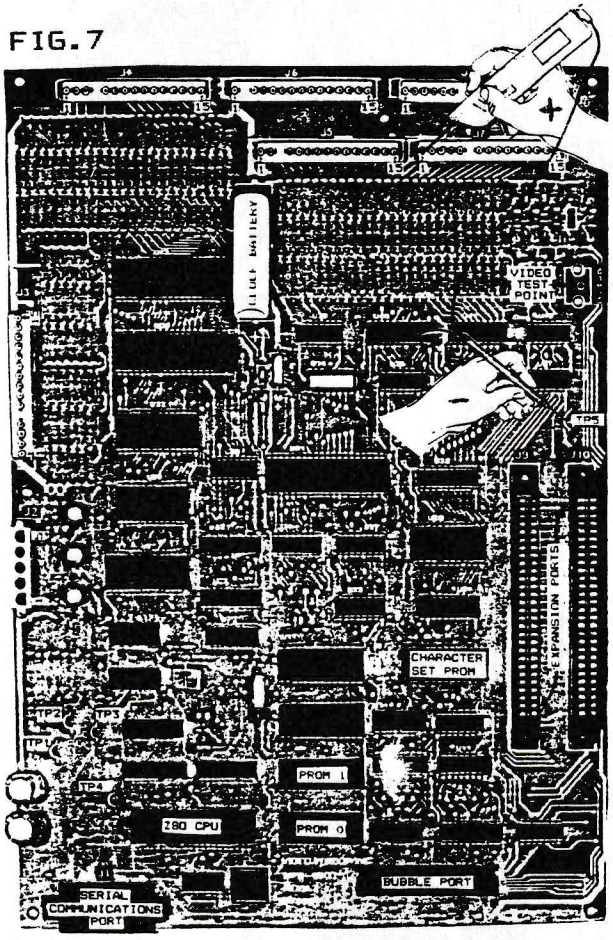



FIG. 8

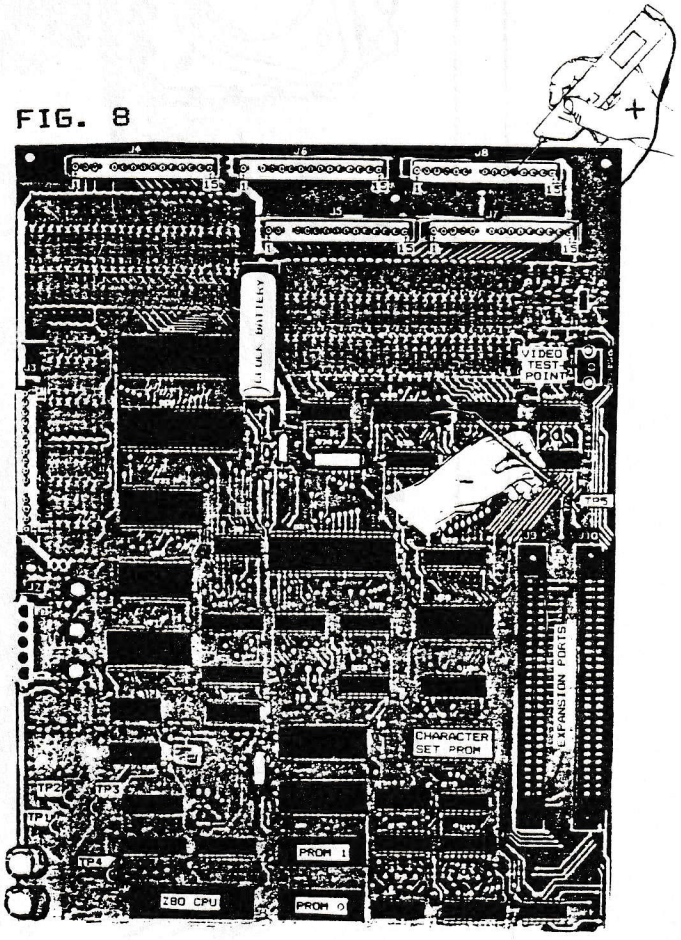
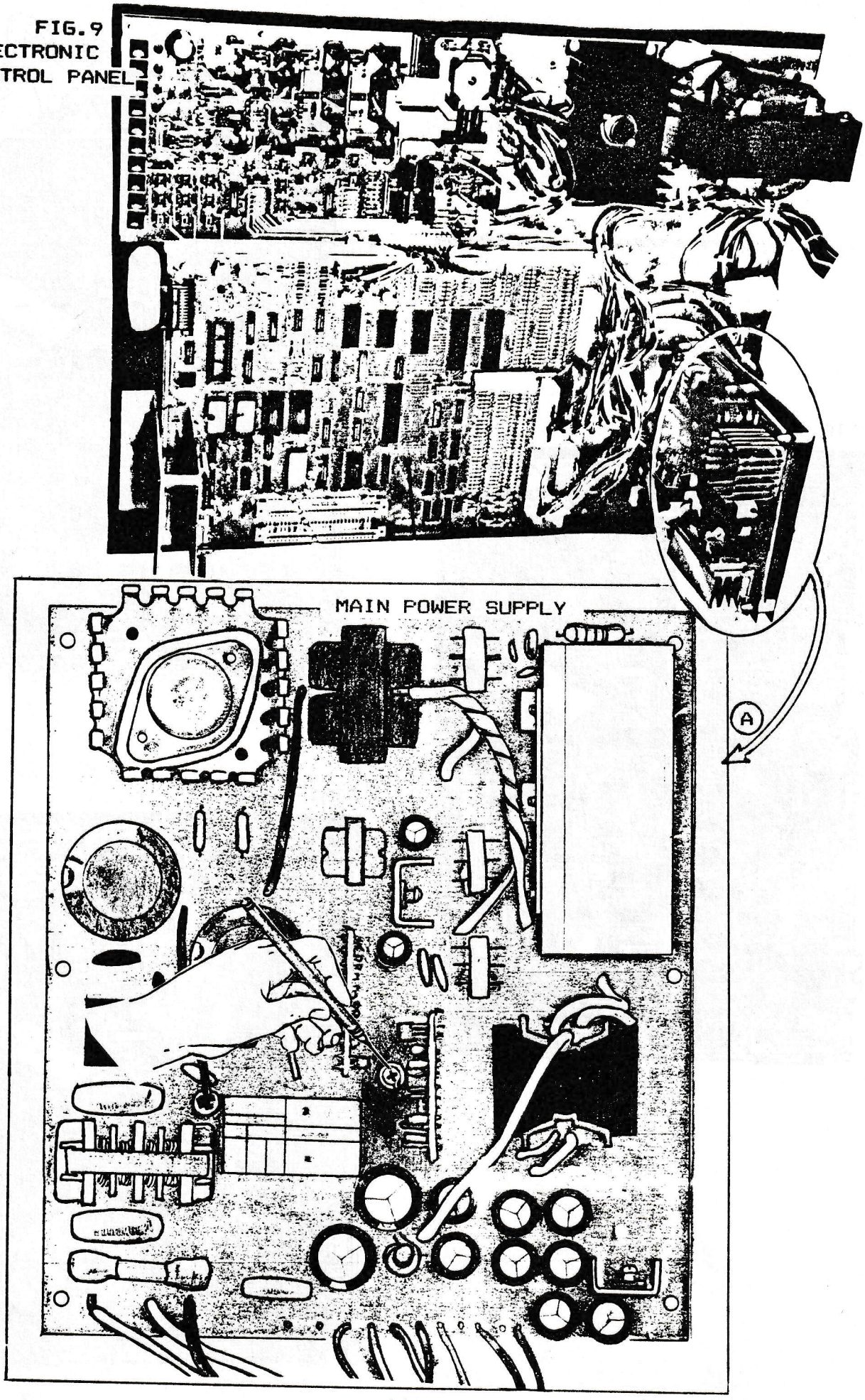


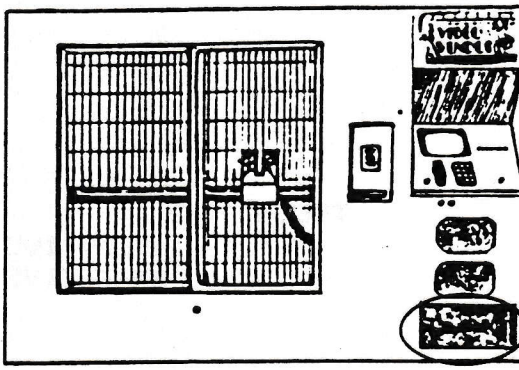
FIG.9
ELECTRONIC
CONTROL PANEL



VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #13a.

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



## TESTING FOR AND UNDERSTANDING THE PROPER VOLTAGE READINGS ON THE MOTOR CONTROLLER BOARD (MCB-1000)

DESCRIPTION:

THE MOTOR CONTROLLER BOARD IS THE POWER BEHIND THE MECHANICAL MOVEMENT OF THE VIDEO VENDOR. THIS BOARD IS LOCATED ON THE LEFT SIDE OF THE ELECTRONICS COMPARTMENT AND MEASURES APPROXIMATELY 6 x 11 inches. (See FIG. 1)

There are 5 PLUG-IN CONNECTIONS for CABLE ASSEMBLIES to connect to... THESE ARE LABELED J1 - J5
There are 2 TEST POINTS for TESTING THE AVAILABLE VOLTAGE on the board...
TEST POINTS ARE LABELED +24 and GND

THE RECOMMENDED TEST INSTRUMENT IS ...
FLUKE MODEL 73 DIGITAL MULTIMETER

-When doing these tests keep the POWER ON and THE DIAGNOSTICS SCREEN, FEATURE 19 ON THE MONITOR-

+++ AT ALL TIMES EXERCISE CAUTION: 120 VOLTS AC IS PRESENT IN THE DRAWER WHEN POWER IS ON +++

## TESTING

See Fig.1: TP +24 - Circled "A", TP GND - Circled "B".

SET YOUR VOLTMETER TO VOLTAGE (DC)

NOTE: Voltages BELOW 1 volt are considered LOW SIGNALS
ABOVE 3 volts are considered HIGH SIGNALS.

YOU MAY NOT GET THE ACTUAL READINGS SHOWN, BUT IF YOUR READING FALLS WITHIN THE HIGH OR LOW RANGE IT IS ACCEPTABLE .

TOUCH THE:
NEGATIVE LEAD (PROBE) TO -TP GND (GROUND)
POSITIVE LEAD TO:

| | AVERAGE READINGS | ACTUAL READINGS |
|---|---|---|
| TP +24 | 24 VOLTS DC | 23.16 |

IF YOUR ACTUAL READINGS FALL 10% ABOVE OR 10% BELOW THESE AVERAGE READINGS CALL VIDEO VENDOR, INC. FOR ADVICE.

---

## TESTING the J-CONNECTOR PLUGS

For testing J1 ONLY the ground (TP5) on the MPB-1000 must be used. See Technical Service Bulletin #13 page 9, Circled "B".

For testing J2 - J5 LEAVE THE BLACK PROBE (NEGATIVE LEAD) on TP GND Circled "B".

TOUCH AND PROBE WITH THE POSITVE LEAD TO EACH TERMINAL IN QUESTION. THE NUMBER 1 TERMINAL IS ALWAYS THE FIRST TERMINAL CONNECTION ON THE LEFT OF EACH J-SOCKET AND IS MARKED ON THE BOARD. SEE CHARTS ON THE FOLLOWING PAGES:
NOTE: The "missing pin" position on each J Connector counts when numbering pins.

---

## J1 CONNECTOR SOCKET

See FIG. 1 (inputs from Micro Processor Board MPB-1000)
Use the keypad to create the proper situations for the readings:

| | ACTUAL READINGS | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|
| #1 | 4.89 DC | ACCESS DOOR LOCKED | RECEIVES COMPUTER INSTRUCTION FROM MAIN PROCESSOR BOARD TO LOCK OR UNLOCK ACCESS DOOR BY ACTIVATING Q16 |
| | .099 DC | IF [1] KEY PUSHED DOOR UNLOCKS | |

NOTE: Door will only unlock if magnet is in front of reed switch in door frame.

| | ACTUAL READINGS | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|
| #2 | 4.89 DC | BEEPER OFF | BEEPER |
| | .099 DC | BEEPER ON push key 0 | |

| | ACTUAL READINGS | | CONDITIONS | FUNCTION PERFORMED |
|---|---|---|---|---|
| #3 | 4.89 | DC | IF MONEY SOLENOID NOT ON | MONEY-COIN |
| | .099 | DC | IF COIN RELEASE SOLINOID CLICKS | RELEASE |
| | | | push key [←] | |
| #4 | 4.89 | DC | NORMAL:NO MOVEMENT OR GOING RIGHT | X-DIRECTION |
| | .124 | DC | WHEN TAPE CARRIER IS MOVING LEFT | SELECT |
| | | | (See #6 below) | |
| #5 | | | NOT USED | KEY |
| #6 | .122 | DC | X-MOTOR ON: CARRIER MOVING LEFT OR RIGHT | X-MOTOR ON |
| | | | push key [4] or [6] | |
| | 4.89 | DC | X-MOTOR OFF; NO MOVEMENT | |
| #7 | 4.89 | DC | NORMAL:X-CARRIER NOT IN SLOW SPEED | X-MOTOR SLOW |
| | .011 | DC | WHEN X GOES INTO SLOW SPEED ON FINAL POSITIONING | SELECT |
| #8 | | | | GROUND |
| #9 | 4.89 | DC | WHEN Z-MOTOR NOT ON | Z-MOTOR ON |
| | .118 | DC | WHEN Z-MOTOR IS ON | |
| | | | push key [7] or [9] | |
| #10 | 4.90 | DC | ALWAYS ON | +5 VOLT POWER SUPPLY |
| #11 | .121 | DC | Z-DIRECTION AT REST OR GOING OUT | Z-DIRECTION |
| | 4.89 | DC | Z-DIRECTION GOING IN | SELECT |
| | | | push key [9] | |
| #12 | 4.89 | DC | GRABBER OFF | GRABBER |
| | .100 | DC | GRABBER ON | SOLENOID |
| | | | push key [3] | |
| #13 | 4.89 | DC | Y-MOTOR OFF or GOING DOWN | Y-MOTOR |
| | .123 | DC | Y-MOTOR GOING UP | DIRECTION |
| | | | push key [2] or [8] | SELECT |
| #14 | 4.89 | DC | Y-MOTOR OFF | Y-MOTOR ON |
| | .121 | DC | Y-MOTOR ON | |
| | | | push key [2] or [8] | |
| #15 | 4.89 | DC | NORMAL: MOTOR NOT IN SLOW SPEED | Y-MOTOR SLOW |
| | .122 | DC | WHEN MOTOR GOES INTO SLOW ROUTINE TO FIND SHELF | SELECT |

All readings are made with the black lead of the meter on a MCB test ground loop and the red lead touching the numbered pin indicated under "PIN". Refer to Fig. 1 for location on MCB.

## J2 CONNECTOR SOCKET

| PIN | NORMAL OPERATION | 3 AMP FUSE BLOWN | INTERLOCK OPEN | FUNCTION | WIRE COLOR |
|---|---|---|---|---|---|
| 1 | 23.8 + 3 | .3 | 23.2 | +24V DC unreg | org/blk |
| 2 | .1<br>.0 press ← on keypad | .0 | | BILL VALIDATOR | gry/blk |
| 3 | .0<br>22.6 | .9<br>.0 | 22.6<br>0 | SONALERT:no sound<br>SONALERT:beeping | blk/brn |
| 4 | 23.6<br>0.0 press COIN button on MCB | .0 | | COIN LOCKOUT | grn/yel |
| 5 | | | | KEY | |
| 6 | 23.4 | 0 | 23.4 | +24V DC | red/gry |

## J3 CONNECTOR SOCKET

| PIN | NORMAL OPERATION | 3 AMP FUSE BLOWN | INTERLOCK OPEN | FUNCTION | WIRE COLOR |
|---|---|---|---|---|---|
| 1 | 1.0<br>21.0 | 0<br>0 | 10.0<br>1.0 | X-MOTOR LEFT<br>X-MOTOR RT | blk |
| 2 | 21.0<br>.8 | 0<br>0 | 10.0<br>.8 | X-MOTOR LEFT<br>X-MOTOR RT | wht/yel |
| 3 | 20.0<br>.8 | 0<br>0 | 13.0<br>.7 | Y-MOTOR UP<br>Y-MOTOR DOWN | grn/red |
| 4 | 1.1<br>20.0 | 0<br>0 | 13.0<br>.9 | Y-MOTOR UP<br>Y-MOTOR DOWN | yel/blu |
| 5 | 29.6 + 3 | .3 | 29.6 | +28V DC unreg | org/blk |

| PIN | NORMAL OPERATION | 3 AMP FUSE BLOWN | INTERLOCK OPEN | FUNCTION | WIRE COLOR |
|---|---|---|---|---|---|
| 6 | 23.6 | .3 | 23.6 | DOOR CLOSED Magnet Deenergised | grn/blk |
| | .7 | .3 | .7 | DOOR OPEN Magnet Energised | |
| 7 | | | | KEY | |
| 8 | 0.7 | 0 | 0.7 | Z-MOTOR IN | wht/blk |
| | 21.0 | 0 | 0.7 | Z-MOTOR OUT | |
| 9 | 21.0 | 0 | 0.7 | Z-MOTOR IN | red/blk |
| | 0.7 | 0 | 0.7 | Z-MOTOR OUT | |
| 10 | 29.6 | 0 | 29.6 | GRABBER OPEN | grn/blk |
| | 0.8 | 0 | 0.7 | GRABBER CLOSED | |

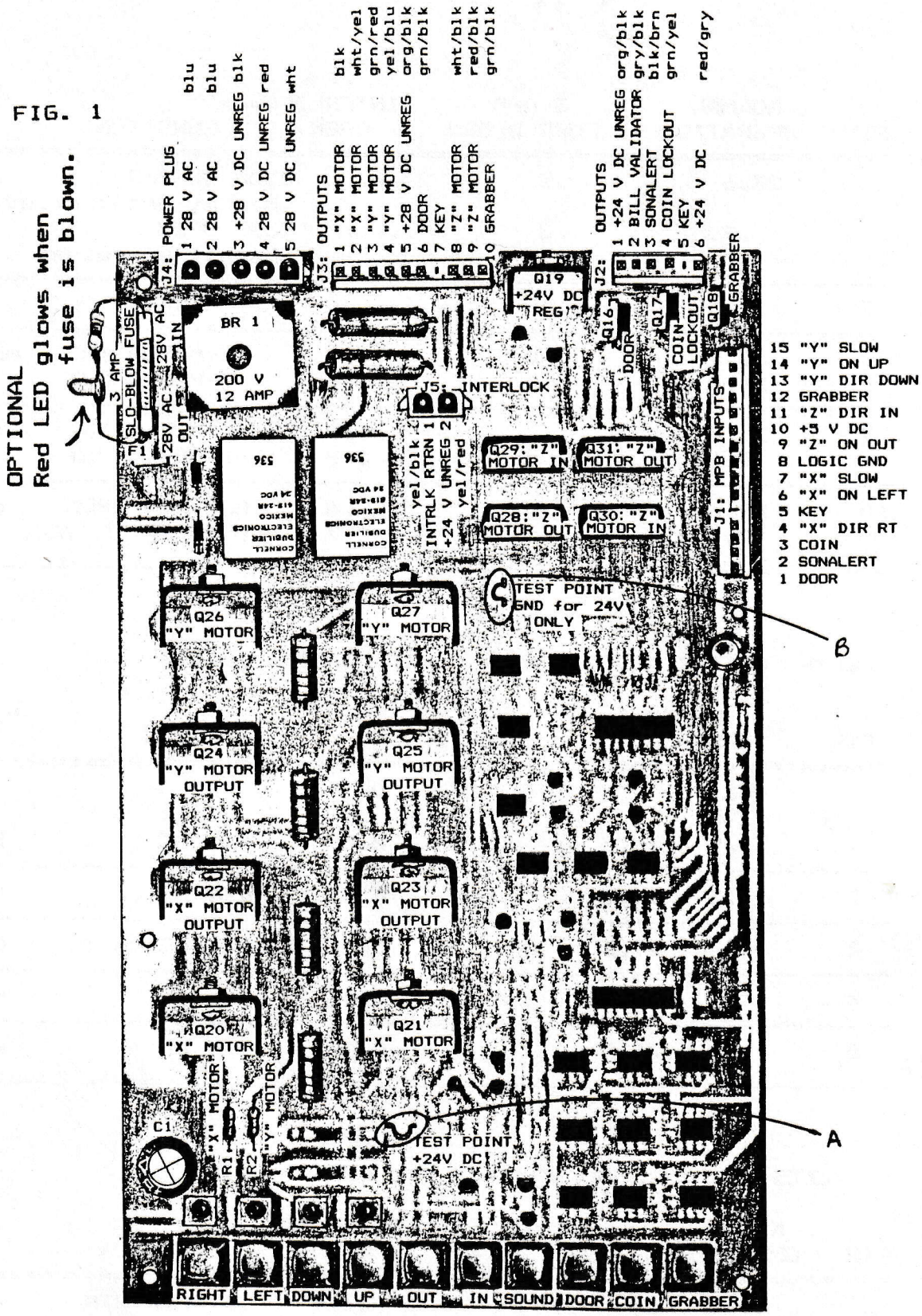
## J4 CONNECTOR POWER 24V

| PIN | NORMAL OPERATION | | 3 AMP FUSE BLOWN | | FUNCTION | WIRE COLOR |
|---|---|---|---|---|---|---|
| | AC | DC | AC | DC | | |
| 1 | 14.5 | 14.5 | 28.0 | 0.5 | 28V AC | blu |
| 2 | 14.5 | 14.5 | 0.5 | 0.3 | 28V AC | blu |
| 3 | | 29.5 | | 0.5 | +28V DC unreg | blk |
| 4 | | 24.0 | | 0.4 | 24V DC | red |
| 5 | | 23.5 | | 0.4 | 24V DC | wht |

## J5 INTERLOCK PLUG

| PIN | NORMAL OPERATION | 3 AMP FUSE BLOWN | INTERLOCK OPEN | FUNCTION | WIRE COLOR |
|---|---|---|---|---|---|
| 1 | 23.8 | 0.3 | 22.9 | INTRLCK RTN | yel/blk |
| 2 | 23.8 | 0.3 | 23.6 | +24V DC unreg | yel/red |

FIG. 1

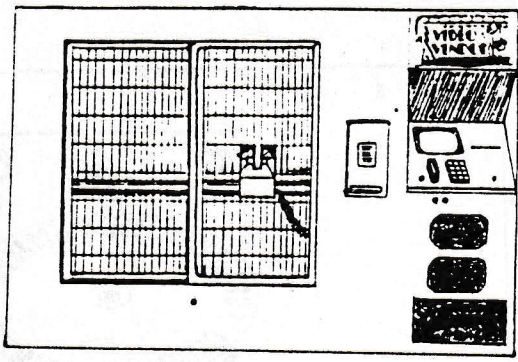



THE MOTOR CONTROLLER BOARD MCB-1000

VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #14

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓



OCTOBER 29, 1986
SUBJECT: MODIFYING OLDER VIDEO VENDORS

I. ADDING CAPACITORS TO THE DRIVE MOTORS TO REDUCE ELECTRICAL NOISE

Video Vendors manufactured from Nov. 1985 - approx. June 1986 were equipped with Zener diodes across the motor brushes to reduce the brush electrical noise (See FIG. 1). Over a period of time, we have discovered that these Zener diodes can fail. This failure usually results in the drive motors appearing very sluggish or in the fuse (3 amp Slow Blow) on the motor controller board (MCB 1000) blowing out.

On rare occasions you may only see the machine fail to retrieve a tape, coming up short of the slot. Regularly coming up short of the designated slot could be indicative of additional pulses being added to the counters due to the Zener diodes.

To correct the problems described above, first determine whether your machine has the Zener diodes. This is easy to do because all machines already equipped with the capacitor filters have a stainless steel hose clamp holding the unsoldered ends of the capacitor leads against the X- and Y-Motors. See FIG. 2. If these motors on your machine have no hose clamps (See FIG. 1), you will want to plan on upgrading it by ordering: Capacitor Kit #K8A-805. The kit is available with complete instructions to customers who need it at no charge. NOTE: If your machine is working fine, it is not necessary to make this modification immediately. Just order the kit to keep it on hand.

II. ADJUSTING THE SPRING TENSION ON THE TROLLEY SYSTEM TO REDUCE MECHAICAL FRICTION

We have found that it is possible to reduce the spring tension on the vertical ball bearing trolley without sacrificing performance. To accomplish this, you will remove two spring washers from each screw in the vertical trolley on both sides of the machine. This should be done immediately as it results in a smoother and faster running machine and will reduce the wear on the vertical rails considerably.

To better understand where this component is located, refer to page 12 of your Parts Manual: detail 12-4A. You will find that using a Hex Ball type Allen wrench will allow you to work at an angle making the job easier. (They are made by Bondhus and are usually available at most large hardware stores.)

1. Open the side door to get at the screws on the vertical trolley -- left side.
2. You must remove only one screw at a time.
3. Take out two (1 pair) Belleville spring washers, ten (5 pair) should remain. See FIG. 3.
4. Replace the screw.
5. Repeat steps 3 & 4 on the other screw.
6. Open the large rear door to get at the screws near the X-moter drive -- right side.
7. Removing one screw at a time, leave ten spring washers (5 pair) under each of the two screws. See FIG. 3.

FIG. 1

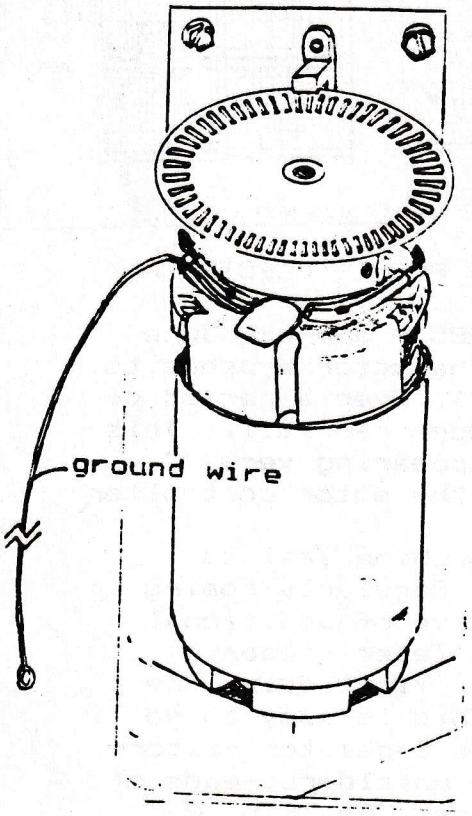
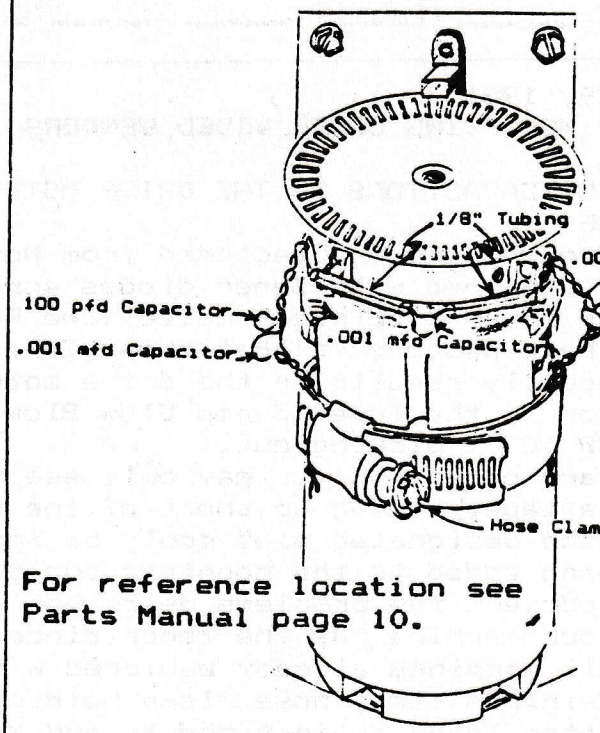



FIG. 2

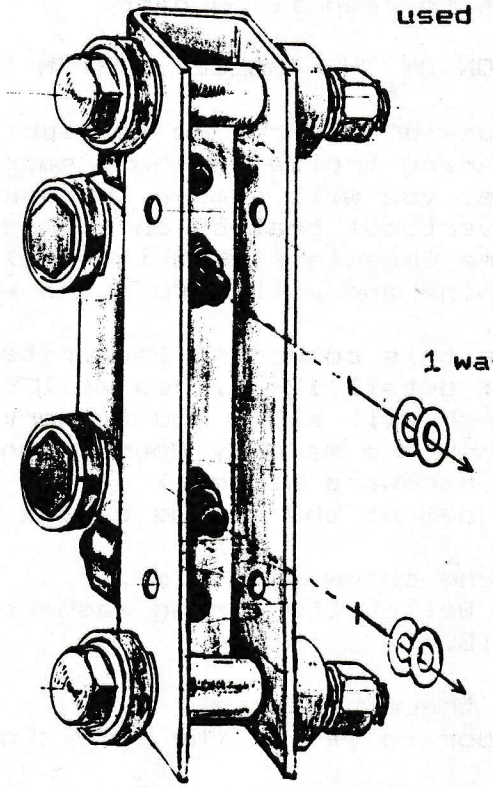
VERTICAL DRIVE MOTOR (Y-Axis)




For reference location see Parts Manual page 10.

FIG. 3

NOTE: Belleville spring washers are used in pair configurations.



1 washer pair removed from each screw.

VIDEO VENDOR
service department

# TECHNICAL SERVICE BULLETIN 15

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

February 20, 1989

**Subject: Internal Wiring Diagrams**

During this year you will be receiving bulletins which show the internal wiring pathways for each of the following circuits:

| Sent: | Topic: |
|---|---|
| 12/04/88 | A. Tape Access Door Solenoid Operation |
| 12/04/88 | B. Motor Control J5 Interlock |
| 12/04/88 | C. Horizontal Motion "X" Motor Power Connection |
| 12/04/88 | D. Vertical Motion "Y" Motor Power Connection |
| 12/04/88 | E. AC Line Circuit |
| | F. Home Encoder |
| | G. Pulse Encoder |
| | H. Dollar Bill Validator |
| | I. Coin Pulse |
| 02/20/89 | J. Keypad |
| | K. Printer |
| | L. Monitor |
| 01/10/89 | M. Retriever Assembly |
| 02/20/89 | N. Intercable Wiring Chart |

Each circuit is shown in a conceptual drawing done from the Rear View of the Video Vendor. Although it is not always possible to actually see all the wiring shown in these diagrams, cutaways are made and obstructions are left out to provide a comprehensive guide to the connections of the wires in the main harness. Each drawing is accompanied by an electrical schematic diagram of the circuit as well.

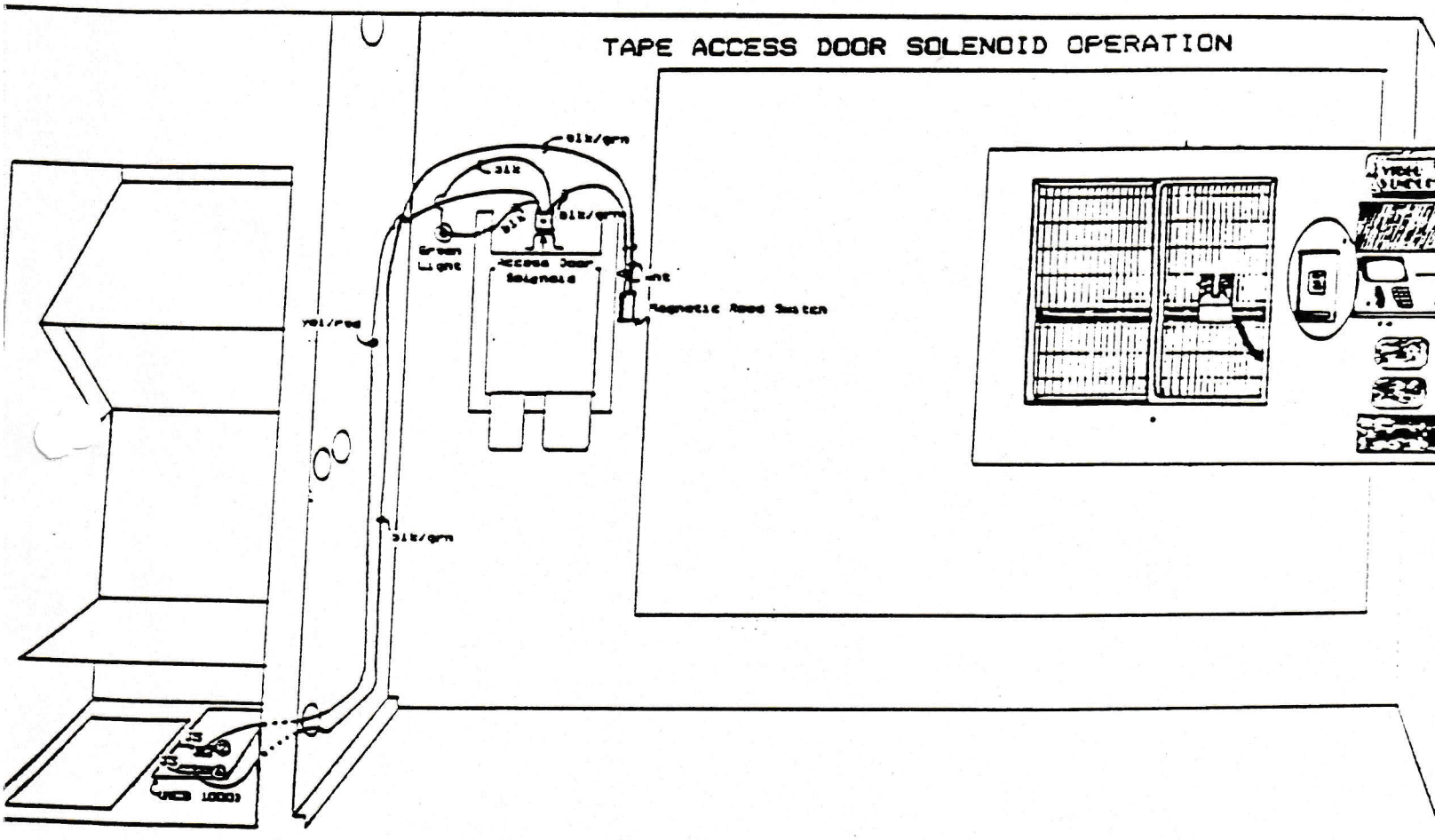
VIDEO VENDOR
service department

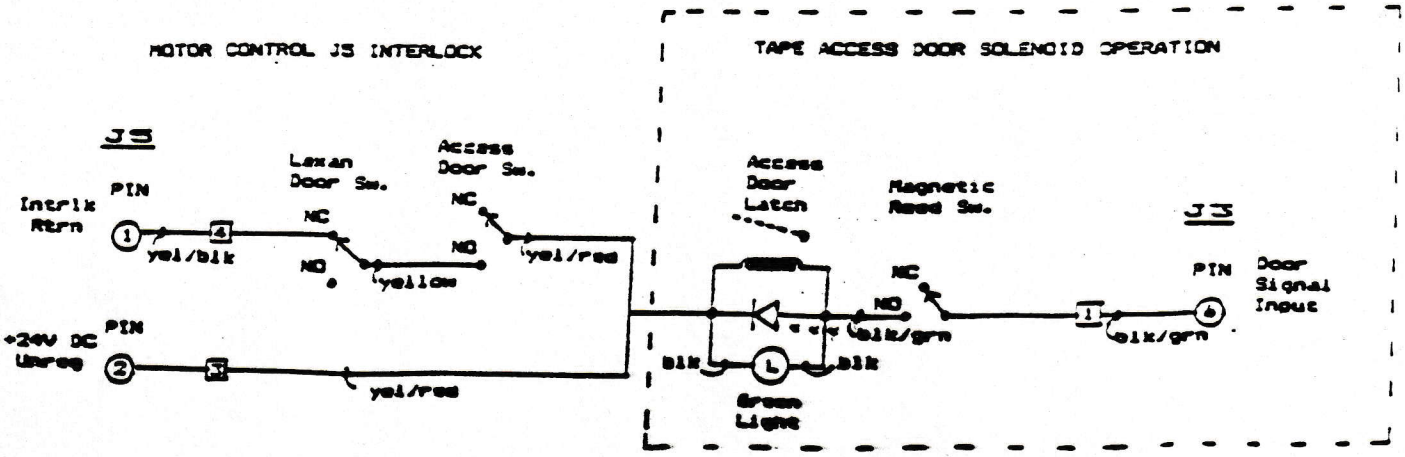
# TECHNICAL SERVICE BULLETIN 15A

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

December 4, 1988
Subject: Internal Wiring Diagrams

## TOPIC: A - TAPE ACCESS DOOR SOLENOID OPERATION



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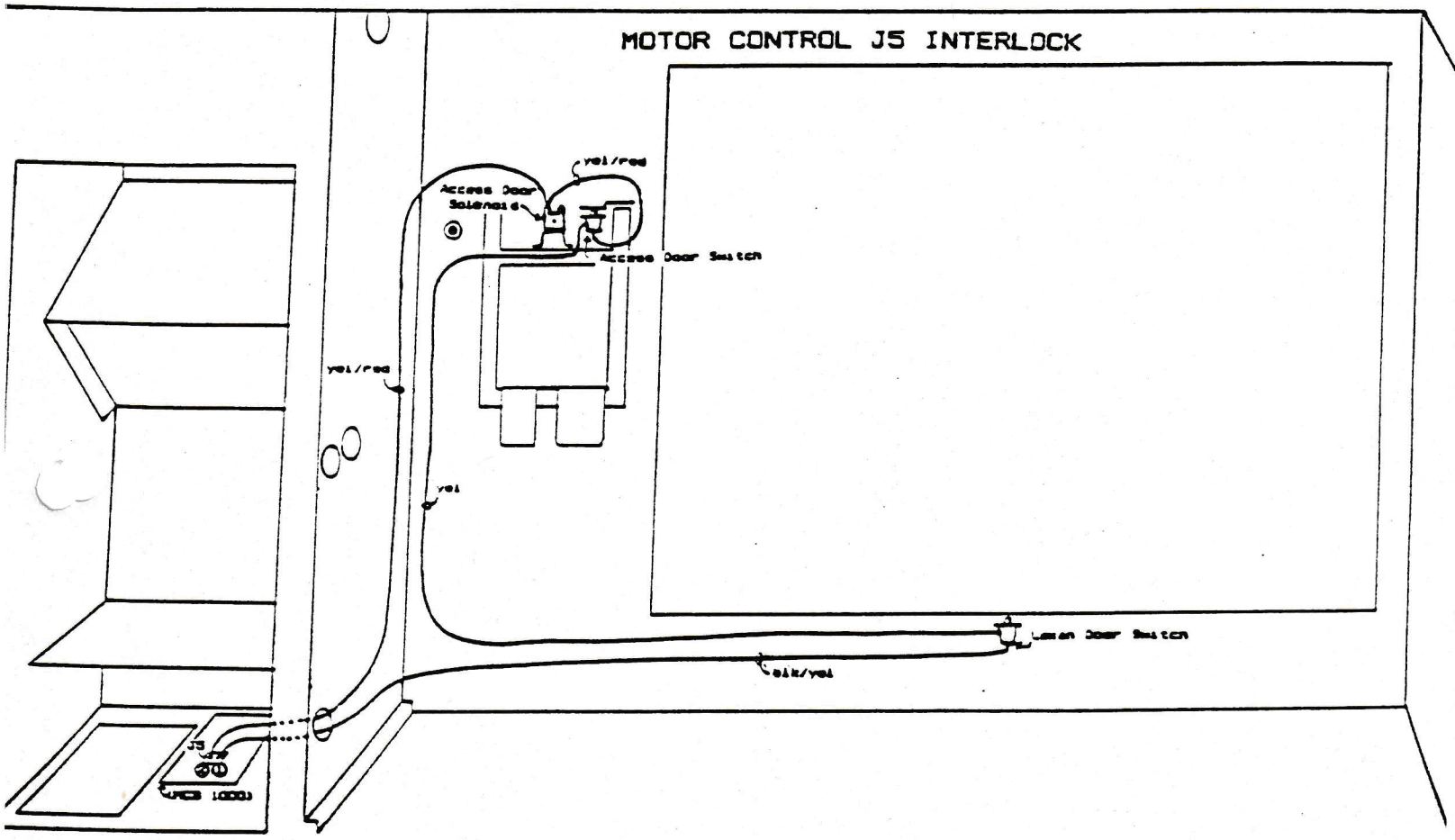
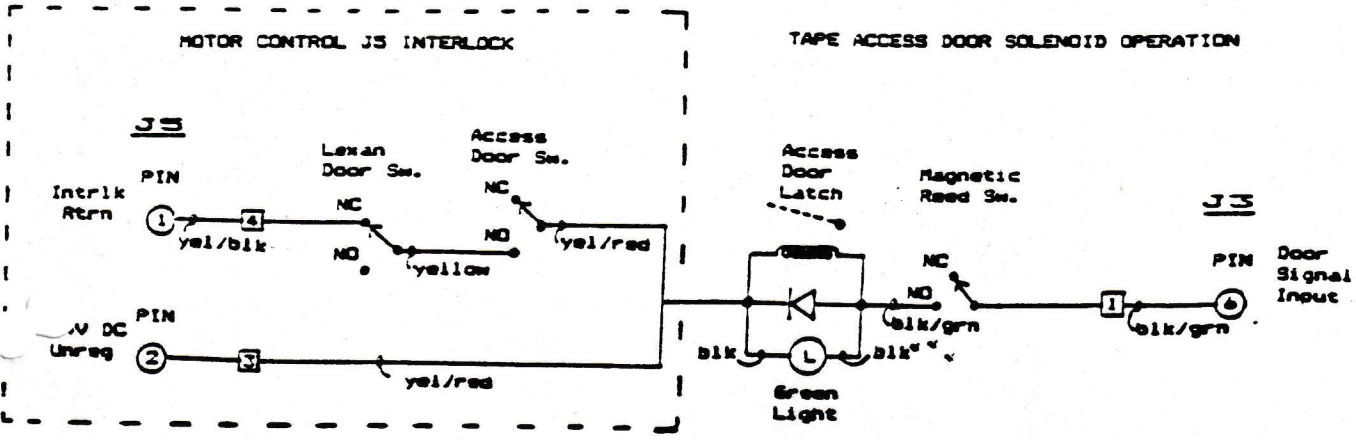
# TECHNICAL SERVICE BULLETIN 15B

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

December 4, 1988
Subject: Internal Wiring Diagrams

## TOPIC: B - MOTOR CONTROL J5 INTERLOCK



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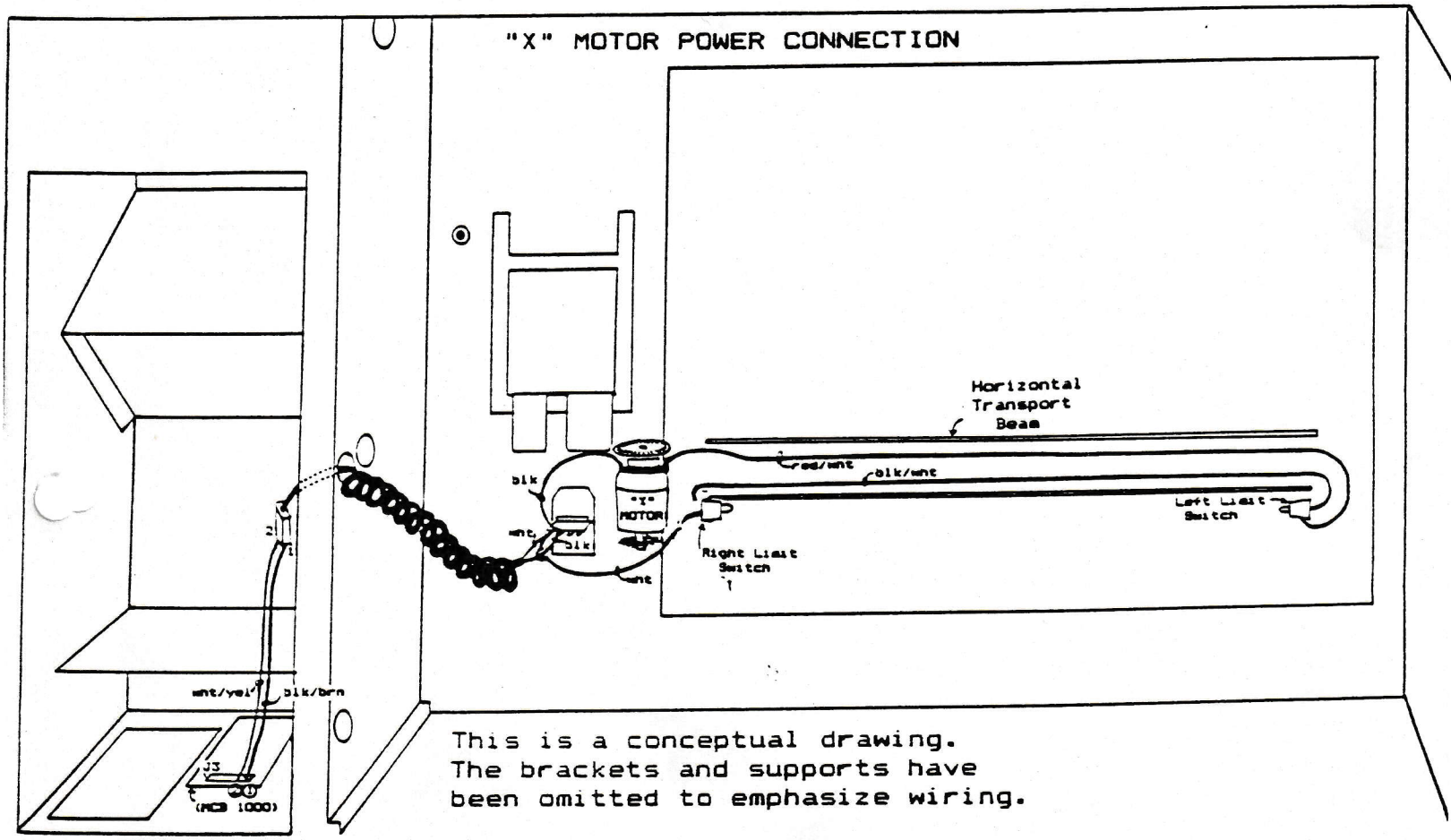
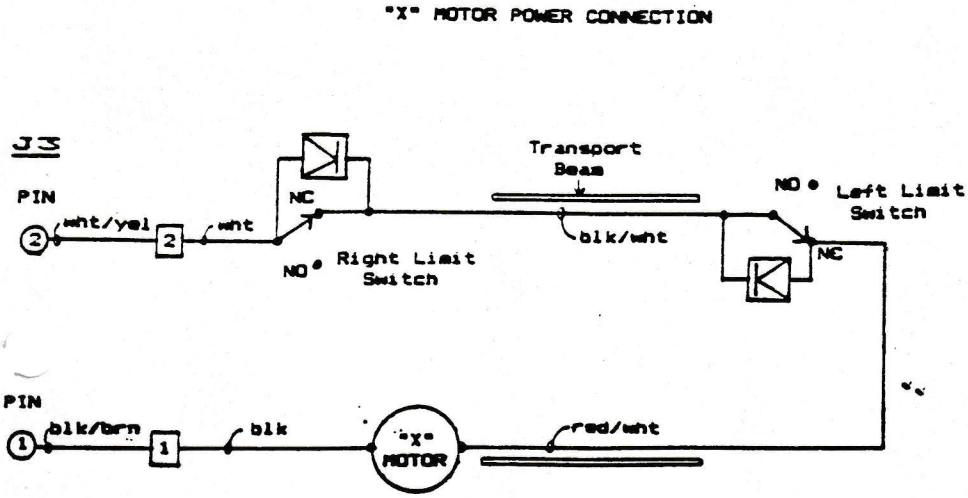
# TECHNICAL SERVICE BULLETIN 15C

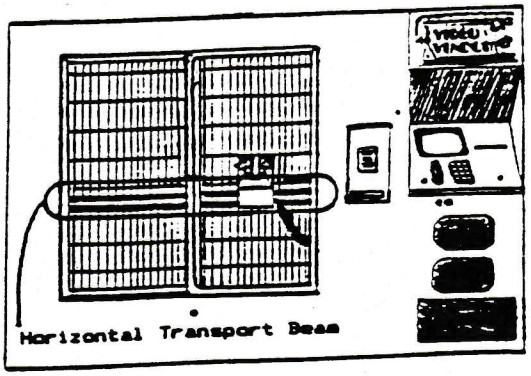
4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

December 4, 1988
Subject: Internal Wiring Diagrams

## TOPIC: C- HORIZONTAL MOTION "X" MOTOR POWER CONNECTION



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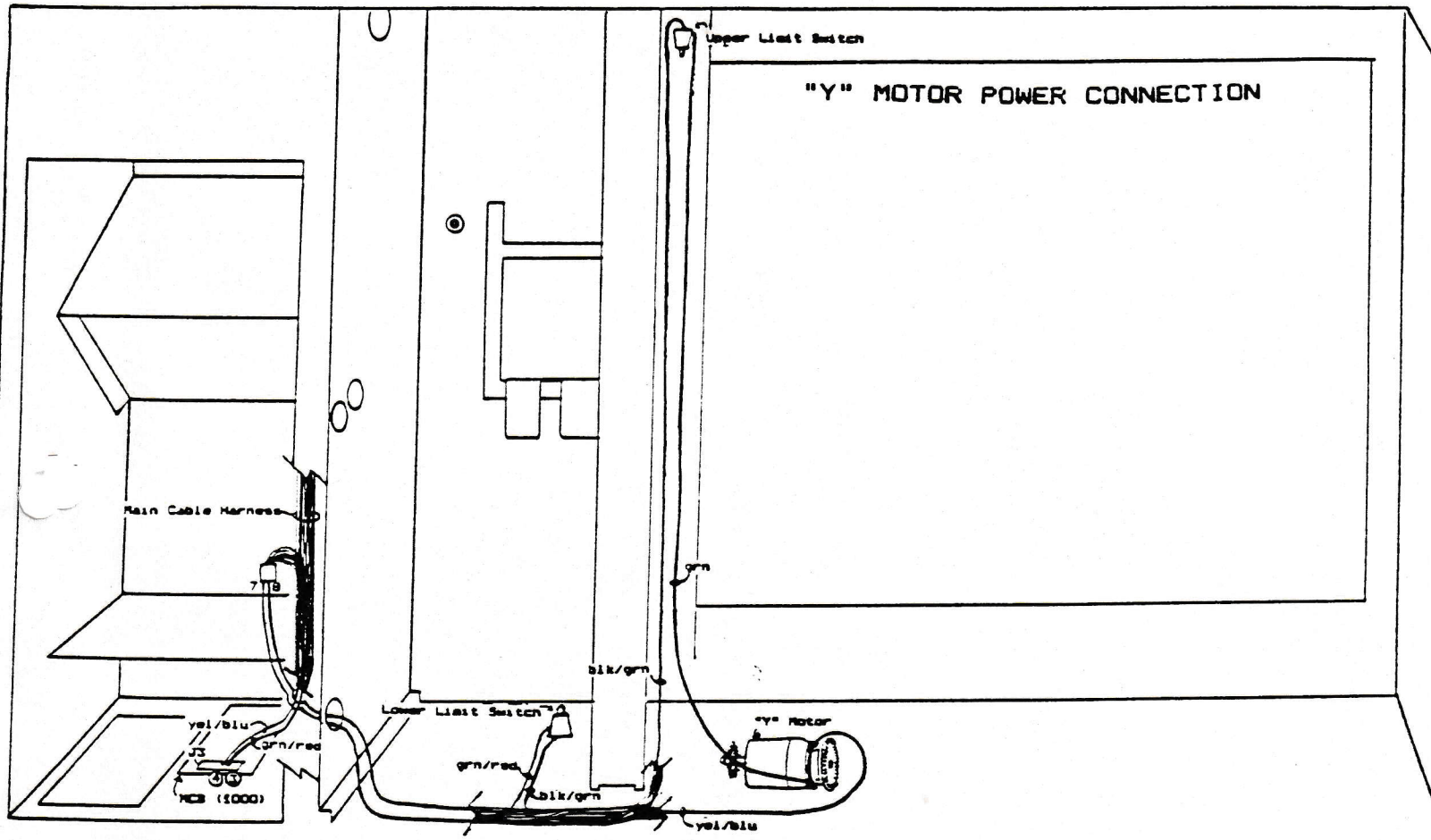
# TECHNICAL SERVICE BULLETIN 15D

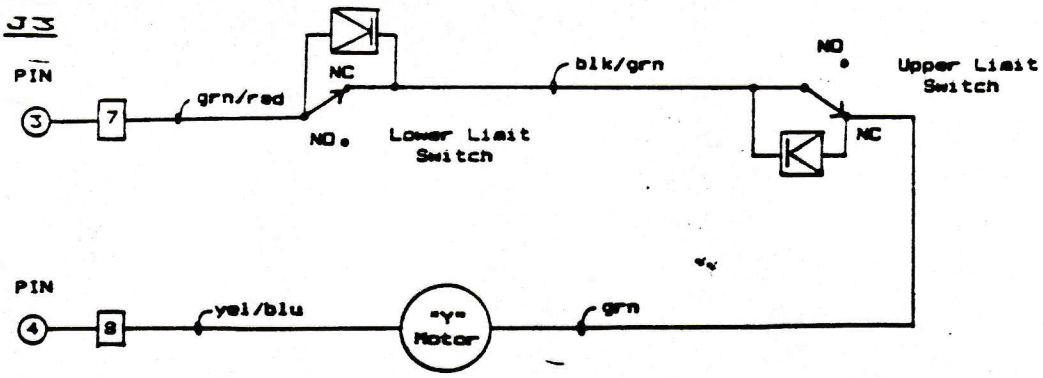
4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

December 4, 1988
Subject: Internal Wiring Diagrams

## TOPIC: D- VERTICAL MOTION "Y" MOTOR POWER CONNECTION




"Y" MOTOR POWER CONNECTION



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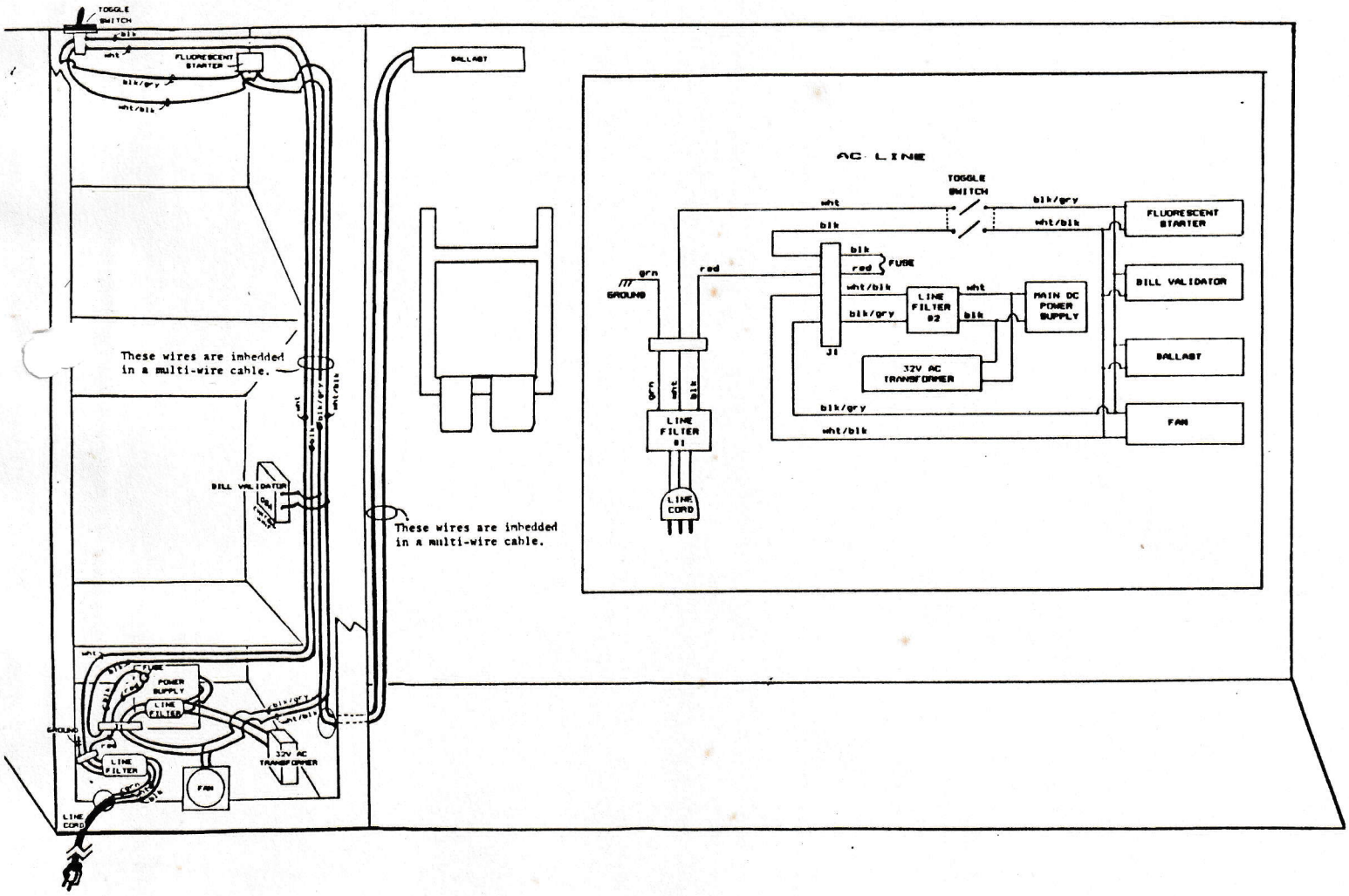
# TECHNICAL SERVICE BULLETIN 15E

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

December 4, 1988
Subject: Internal Wiring Diagrams

## TOPIC: E - AC LINE CIRCUIT



VIDEO VENDOR service department

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

# TECHNICAL SERVICE BULLETIN 15 J

FEBRUARY 20, 1989

SUBJECT: INTERNAL WIRING DIAGRAMS

## TOPIC: J - KEYPAD

Here are three descriptions of the internal wiring and workings of the Keypad. Fig. 1 shows the basic layout of the key pad, connectors and wiring. If you suspect that a key on the keypad is not working, you can use the following information to check it out.

Fig. 2 is a matrix of the pins as they correspond to the Key Pad keys. Fig. 3 is the chart of outputs for checking continuity when a key is being depressed. All tests on the key pad should be made statically with the power to the machine shut off. The continuity checks are made with an OHM meter connected between the pins indicated in Fig. 3's chart. For each Key on the KeyPad depressed you should read continuity on the OHM meter between the keys indicated. If no continuity is measured the KeyPad is bad and should be replaced.

FIG. 1

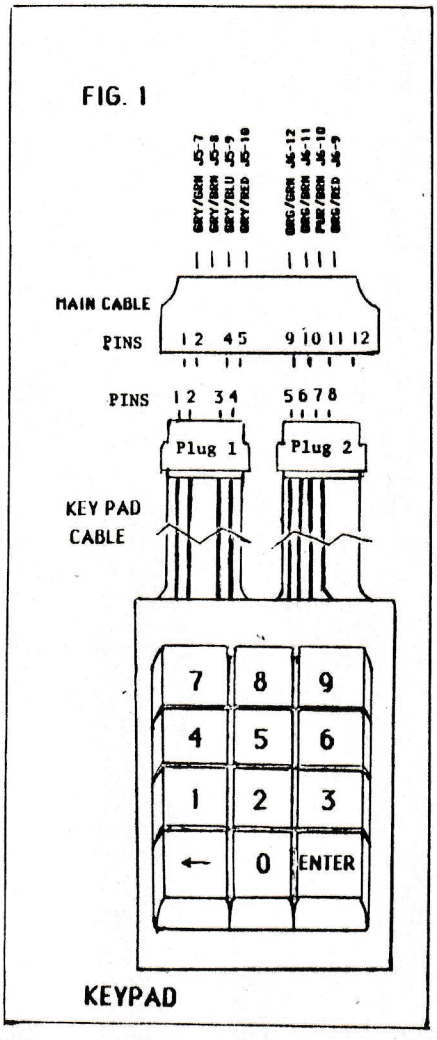



FIG. 2

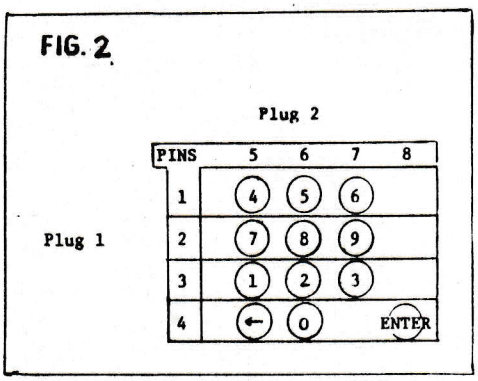



FIG. 3

| SELECTED KEY AND ITS OUTPUT | |
|---|---|
| DEPRESS KEY # | PLUG 1 & PLUG 2 CONTINUITY BETWEEN PINS |
| 1 | 3 & 5 |
| 2 | 3 & 6 |
| 3 | 3 & 7 |
| 4 | 1 & 5 |
| 5 | 1 & 6 |
| 6 | 1 & 7 |
| 7 | 2 & 5 |
| 8 | 2 & 6 |
| 9 | 2 & 7 |
| 0 | 4 & 6 |
| ← | 4 & 5 |
| ENTER | 4 & 8 |

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# TECHNICAL SERVICE BULLETIN 15M

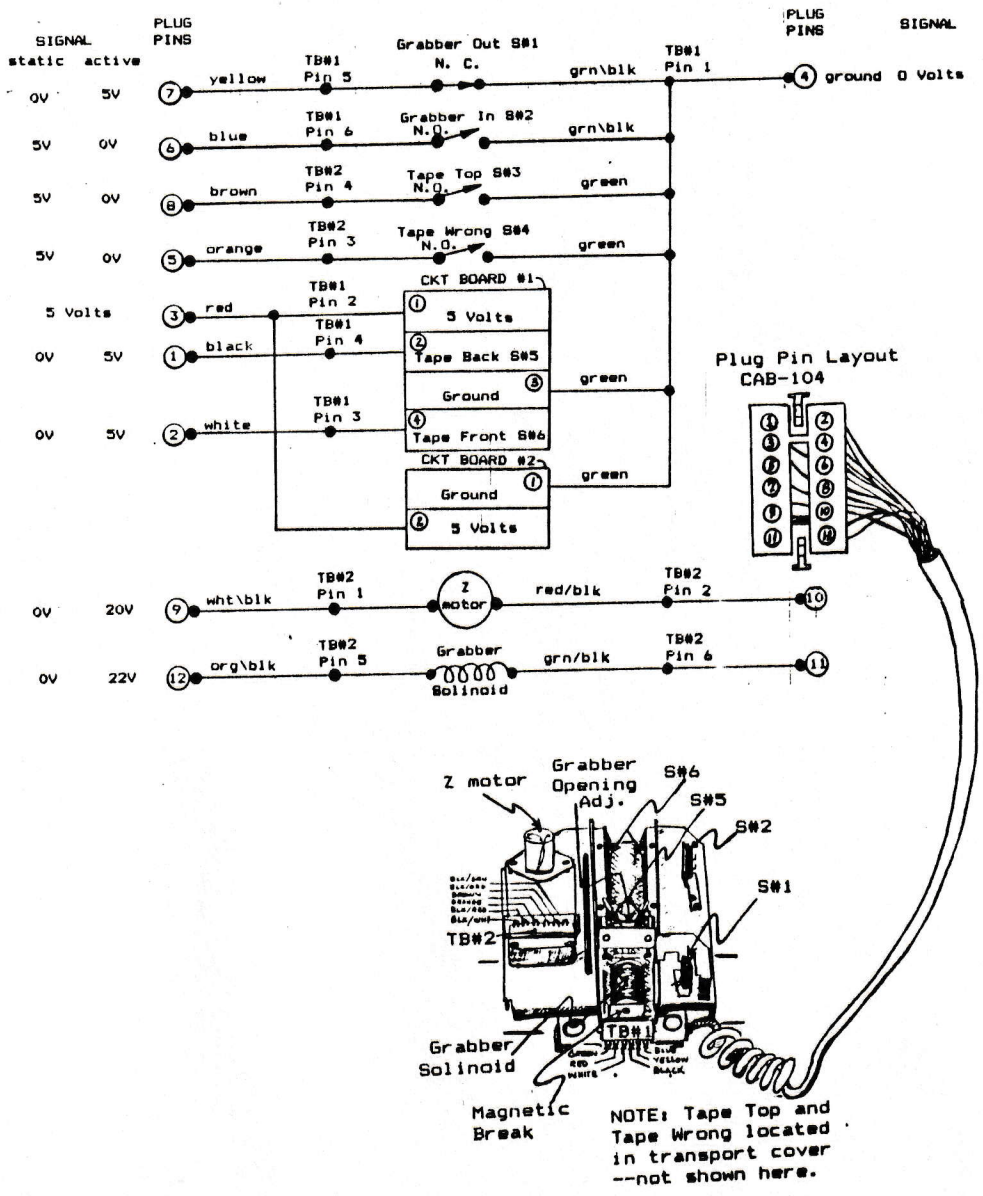
4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

January 10, 1989
Subject: Internal Wiring Diagrams

## TOPIC: M - RETRIEVER ASSEMBLY

This diagram represents the layout of the electrical connections for the retriever and its coiled cord. Also included are the voltage readings at each of the pin connections. The static readings are taken without a cassette in the retriever. The active readings are taken when the retriever has retrieved a cassette. This schematic should prove helpful in troubleshooting problems with the retriever and a better understanding of its operation.

### RETRIEVER ASSEMBLY SCHEMATIC



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# TECHNICAL SERVICE BULLETIN 15N

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

February 20, 1989

## INTERCABLE WIRING CHART

| DESCRIPTION | ORIGIN | PIN | COLOR | DESTINATION | PIN |
|---|---|---|---|---|---|
| **SOUND ALERT** | | | | | |
| Sonalert 28V | MCB J2 | 6 | red/brn | Beeper | 1 |
| Sonalert signal | MCB J2 | 3 | blk/brn | Beeper | 2 |
| **RETREIVER** | | | | | |
| Tape Back | MPB J4 | 11 | blk | LG Coiled Cd Plg | 1 |
| Tape Front | MPB J4 | 6 | wht | LG Coiled Cd Plg | 2 |
| + 5 Volts | POWER SUPPLY | | red | LG Coiled Cd Plg | 3 |
| Ground | POWER SUPPLY | | grn | LG Coiled Cd Plg | 4 |
| Tape Wrong | MPB J6 | 14 | org | LG Coiled Cd Plg | 5 |
| Grabber In | MPB J4 | 13 | dk blu | LG Coiled Cd Plg | 6 |
| Grabber Out | MPB J4 | 12 | yel | LG Coiled Cd Plg | 7 |
| Tape Top | MPB J6 | 8 | brn | LG Coiled Cd Plg | 8 |
| Z Motor | MCB J3 | 8 | wht/blk | LG Coiled Cd Plg | 9 |
| Z Motor | MCB J3 | 9 | red/blk | LG Coiled Cd Plg | 10 |
| Grabber | MCB J3 | 10 | gry/blk | LG Coiled Cd Plg | 11 |
| + 28 V DC Unreg | MCB J3 | 5 | org/blk | LG Coiled Cd Plg | 12 |
| **"X" DRIVE** | | | | | |
| X Motor | MCB J3 | 1 | blk/brn | SM Coiled Cd Plg | 1 |
| X Motor | MCB J3 | 2 | wht/yel | SM coiled Cd Plg | 2 |
| **"X" HOME** | | | | | |
| Ground | POWER SUPPLY | | grn | MED Coiled Cd Plg | 4 |
| + 5 Volts | POWER SUPPLY | | red | MED Coiled Cd Plg | 3 |
| X Home | MPB J4 | 8 | blu | MED Coiled Cd Plg | 6 |
| **"X" COUNT** | | | | | |
| Ground | POWER SUPPLY | | grn | X Ct Encoder Brd | 4 |
| + 5 Volts | POWER SUPPLY | | red | X Ct Encoder Brd | 3 |
| X Count | MPB J4 | 15 | wht/org | X Ct Encoder Brd | 2 |
| **LABEL READER** | | | | | |
| Label Reader | MPB J5 | 12 | blk/blu | Labl Readr Board | 1 |
| + 5 Volts | POWER SUPPLY | | red | Labl Readr Board | 3 |
| Ground | POWER SUPPLY | | grn | Labl Readr Board | 4 |
| Label Reader | MPB J6 | 7 | org | Labl Readr Board | 5 |
| **"Y" DRIVE** | | | | | |
| Y Motor | MCB J3 | 3 | grn/red | Motor Trminal Plg | 7 |
| Y Motor | MCB J3 | 4 | yel/blu | Motor Trminal Plg | 8 |

| DESCRIPTION | ORIGIN | PIN | COLOR | DESTINATION | PIN |
|---|---|---|---|---|---|
| **MONITOR** | | | | | |
| Ground | POWER SUPPLY | | grn | Monitor Plug | 1 |
| Vertical Sync | MPB J8 | 13 | brn/red | Monitor Plug | 2 |
| Composite Video | MPB J8 | 11 | brn/blk | Monitor Plug | 3 |
| + 12 Volts | POWER CABLE | | gry | Monitor Plug | 4 |
| Horizontal Sync | MPB J8 | 15 | brn/gry | Monitor Plug | 5 |
| **BODY SENSOR** | | | | | |
| + 5 Volts | POWER SUPPLY | | red | Body Sensor Plug | 1 |
| Ground | POWER SUPPLY | | grn | Body Sensor Plug | 3 |
| Body Sensor | MPB J4 | 7 | pur/blu | Body Sensor Plug | 5 |
| **BILL VALIDATOR** | | | | | |
| Ground | POWER SUPPLY | | grn | | |
| Bill Pulse | MPB J6 | 6 | pur/red | | |
| AC "Hot" | | | wht | | |
| AC "Neutral" | | | blk | | |
| **PRINTER LOGIC CHARACTERS** | | | | | |
| | MPB J7 | 4 | yel/org | Printer Plug | 1 |
| | MPB J7 | 2 | gry/yel | Printer Plug | 2 |
| | MPB J7 | 14 | pur/blu | Printer Plug | 3 |
| | MPB J7 | 3 | grn/yel | Printer Plug | 4 |
| | MPB J7 | 5 | blu/gry | Printer Plug | 5 |
| | MPB J7 | 7 | blu/gry | Printer Plug | 7 |
| | MPB J7 | 8 | red/blu | Printer Plug | 8 |
| | MPB J7 | 9 | red/grn | Printer Plug | 9 |
| | MPB J7 | 10 | red/yel | Printer Plug | 10 |
| | MPB J7 | 11 | yel/blk | Printer Plug | 11 |
| | MPB J7 | 12 | yel/wht | Printer Plug | 12 |
| | MPB J7 | 13 | yel/grn | Printer Plug | 13 |
| | MPB J7 | 1 | yel/brn | Printer Plug | 16 |
| **PRINTER POWER PLUG** | | | | | |
| + 12 Volts | POWER SUPPLY | | blu | Printer Plug | 1 |
| + 12 Volts | POWER SUPPLY | | blu | Printer Plug | 2 |
| Ground | POWER SUPPLY | | | | 3 |
| Ground | POWER SUPPLY | | | | 4 |
| Ground | POWER SUPPLY | | | | 5 |
| Ground | POWER SUPPLY | | | | 7 |

# TECHNICAL SERVICE BULLETIN 15N

| DESCRIPTION | ORIGIN | PIN | COLOR | DESTINATION | PIN |
|---|---|---|---|---|---|
| **"Y" HOME** | | | | | |
| Ground | POWER SUPPLY | | grn | Y Home Encodr Brd | 7 |
| + 5 Volts | POWER SUPPLY | | red | Y Home Encodr Brd | 3 |
| Y Home Encoder | MPB J4 | 10 | wht/pur | Y Home Encodr Brd | 6 |
| **"Y" COUNT** | | | | | |
| Ground | POWER SUPPLY | | grn | Y Ct Encoder Brd | 7 |
| + 5 Volts | POWER SUPPLY | | red | Y Ct Encoder Brd | 3 |
| Y Count | MPB J4 | 14 | wht/blu | Y Ct Encoder Brd | 5 |
| **ACCESS DOOR** | | | | | |
| Access Dr Latch | MCB J3 | 6 | blk/grn | Access Dr Pwr Sw | |
| + 24 V DC Unreg | MCB J5 | 2 | yel/red | Access Dr Pwr Sw | |
| Interlock Return | MCB J5 | 1 | yel/blk | Access Dr Pwr Sw | |
| Access Dr Signal | MPB J4 | 9 | wht/red | Aces Dr Logic Sw | |
| Ground/Return | POWER SUPPLY | | grn | Aces Dr Logic Sw | |
| **CUSTOMER COMMUNICATION CONSUL** | | | | | |
| Service Door | MPB J6 | 15 | org | Coin D/Service Dr | |
| Ground | POWER SUPPLY | | grn | Coin D/Service Dr | |
| **KEYPAD** | | | | | |
| | MPB J5 | 7 | gry/grn | Keypad Plug | 1 |
| | MPB J5 | 8 | gry/brn | Keypad Plug | 2 |
| | MPB J5 | 9 | gry/blu | Keypad Plug | 4 |
| | MPB J5 | 10 | gry/red | Keypad Plug | 5 |
| | MPB J6 | 12 | org/grn | Keypad Plug | 9 |
| | MPB J6 | 11 | org/brn | Keypad Plug | 10 |
| | MPB J6 | 10 | pur/brn | Keypad Plug | 11 |
| | MPB J6 | 9 | org/red | Keypad Plug | 12 |
| **CARD READER** | | | | | |
| Ground | POWER SUPPLY | | grn | Card Readr Plug | 1 |
| + 5 Volts | POWER SUPPLY | | red | Card Readr Plug | 2 |
| Card Present | MPB J5 | 6 | blu/grn | Card Readr Plug | 3 |
| Clock | MPB J5 | 5 | blu/org | Card Readr Plug | 4 |
| Card Bits | MPB J5 | 4 | blu/pur | Card Readr Plug | 5 |

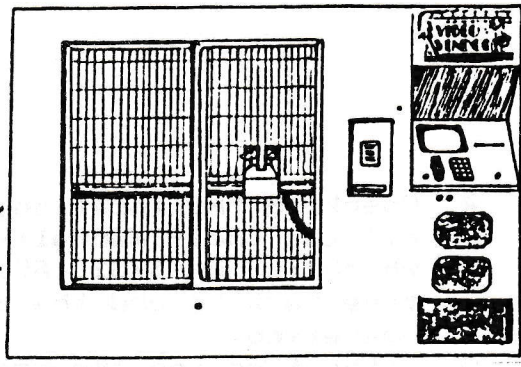
## RS-232 OUTLET PLUG

| DESCRIPTION | ORGIN | PIN | COLOR | DESTINATION | PIN |
|---|---|---|---|---|---|
| TxD (Transmit Data) | J1 | 2 | | EXTERNAL | |
| RxD (Receive Data) | J1 | 3 | | EXTERNAL | |
| $\overline{\text{RTS}}$ (Request to Send) | J1 | 4 | | EXTERNAL | |
| $\overline{\text{CTS}}$ (Clear to Send) | J1 | 5 | | EXTERNAL | |
| $\overline{\text{DSR}}$ (Data Set Ready) | J1 | 6 | | EXTERNAL | |
| GND (Signal Ground) | J1 | 7 | | EXTERNAL | |
| $\overline{\text{DTR}}$ | J1 | 20 | | EXTERNAL | |

VIDEO VENDOR
4236 MAIN STREET
SKOKIE, IL 60076
Service Department

# Technical Service Bulletin #16

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



DECEMBER 18, 1986
SUBJECT: SETTING THE "X" MOTOR AND "Y" MOTOR COUNTS
ENCLOSURE: PLASTIC ARROW, PART #4A-1037

When considering the subject of setting "X" and "Y" Counts, it is important to keep in mind that the "X" Count need only be set ONCE for the entire machine, whereas, a correct "Y" Count must be set for EACH SHELF and the ACCESS DOOR.

## HOW TO SET THE X COUNT

1. Open the large lexan doors and cheat the interlock switch so the transport will work with the doors open.
2. Enter Selection "15" ADJUST COUNTS. Then enter Location #150 which will send the retriever to slot #150.
3. Remove the retriever cover. Also, remove the bottom service/electronics door exposing the Motor Controller Board: (MCB).
4. On the monitor, the Y Count is displayed first. Press -ENTER- to DISPLAY THE X COUNT.
5. Press the black button on the MCB marked "IN" (this will send the grabber toward tape #150), AT THE SAME TIME. Observe the position of the grabber as it surrounds the tape.
   IF the tape is CENTERED BETWEEN THE GRABBERS (See FIG. 1a) the X Count is correct. Press -ENTER- to keep Old X Count.
   IF the tape is NOT CENTERED between the grabbers (See FIG. 1b), adjust the X Count to reposition the grabber to the RIGHT by subtracting or to the LEFT by adding (in increments of 20) to the "Old X Count" on the monitor and enter the adjusted number as "New X Count". Press -ENTER-.
   NOTE: It is important that you READ THE MONITOR very carefully because you are changing the computer programmed locations for the movie slots in your machine. If you make a mistake, the retriever will not be sent to the proper location.
6. Retest after each change until grabber centers on the tape.
7. Reinstall retriever cover unless you will set "Y" Count also.

## HOW TO SET THE Y COUNT

1. Follow steps 1, 2 and 3 for setting the "X" Count.
2. Adjust the position of the tape carriage floor until it is PERFECTLY LEVEL with the shelf by adding or subtracting counts from the "Old Y Count" on the Monitor. Test the levelness by manually sliding a cassette from retriever to shelf and back again. (See FIG. 2)
3. When the retriever carriage floor is perfectly level with the shelf, SUBTRACT 60 from the number now shown for "Old Y Count" and Enter the DECREASED NUMBER as "New Y Count". Now send the retriever back to slot #150.

4. Checking the location, you should be able to slide the tape off the shelf manually. It should fall into the carriage which is now 3/32" BELOW THE SHELF. Therefore, pushing the tape back toward the shelf, it should not be able to be reshelved.
5. Without moving the retriever up or down, right or left, CAREFULLY reinstall the metal, retriever cover.
6. If your retriever cover does not have a plastic arrow, install one as shown in FIG. 3. (Arrow enclosed in this mailing: Part #4A-1037. Order additional arrows @ .50 each.)
7. Take a Test Tape (one you will not use for rental purposes) and place a strip of masking tape along the edge of the cassette as shown in FIG. 4. Insert the Test Tape in the slot just to the left of the retriever cover, so that the arrow points to the masking tape. Draw a horizontal line on the masking tape just opposite the arrow point. (See FIG. 4)
8. This Test Tape and the pointer are now calibrated to indicate the correct Y counts anywhere in this machine. You can send the retriever to any slot location placing the Test Tape three slots to the left of that location and adjust the Y Counts so that the pointer is aligned with the Test Tape's mark.

FIG. 1a

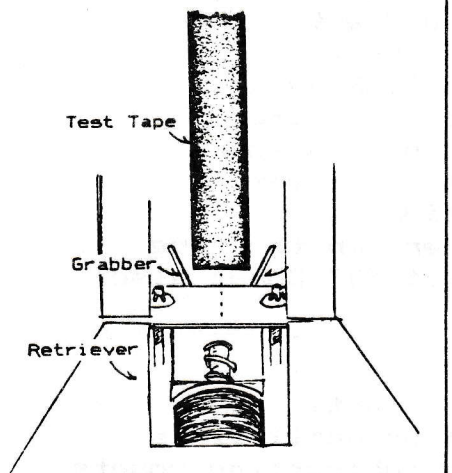



FIG. 1b

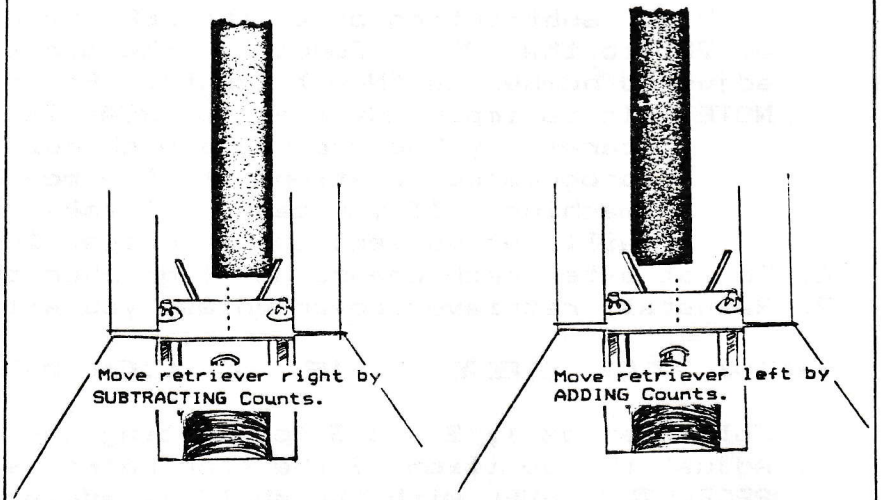


FIG. 2

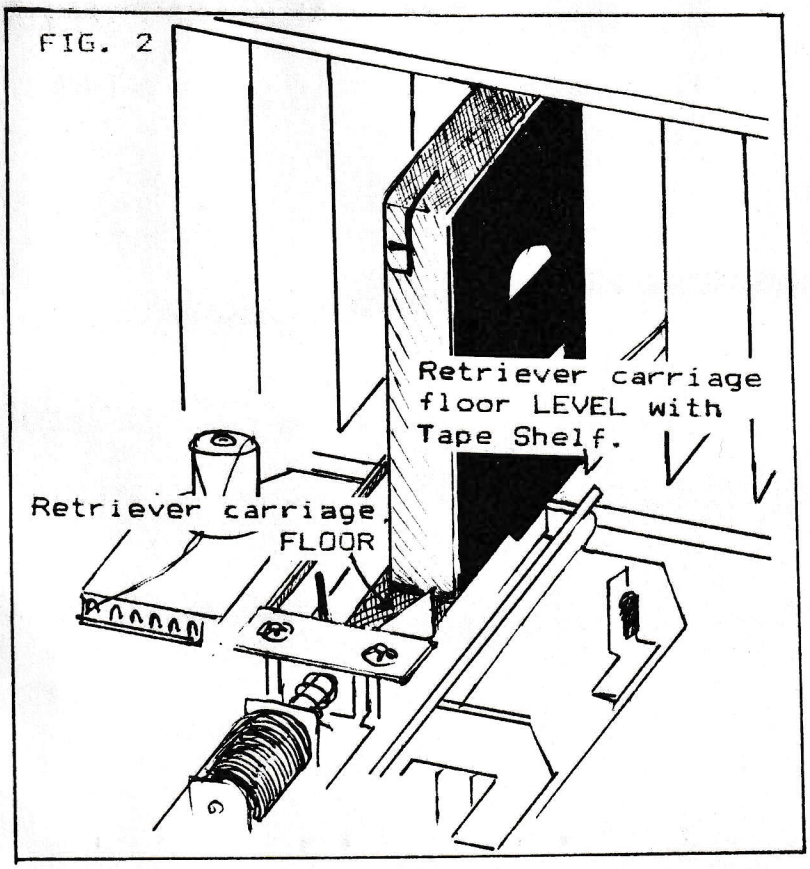



FIG. 3

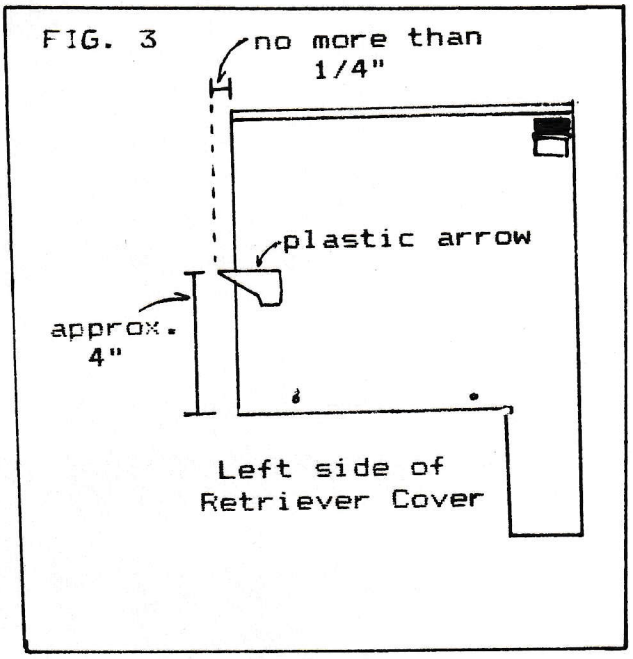
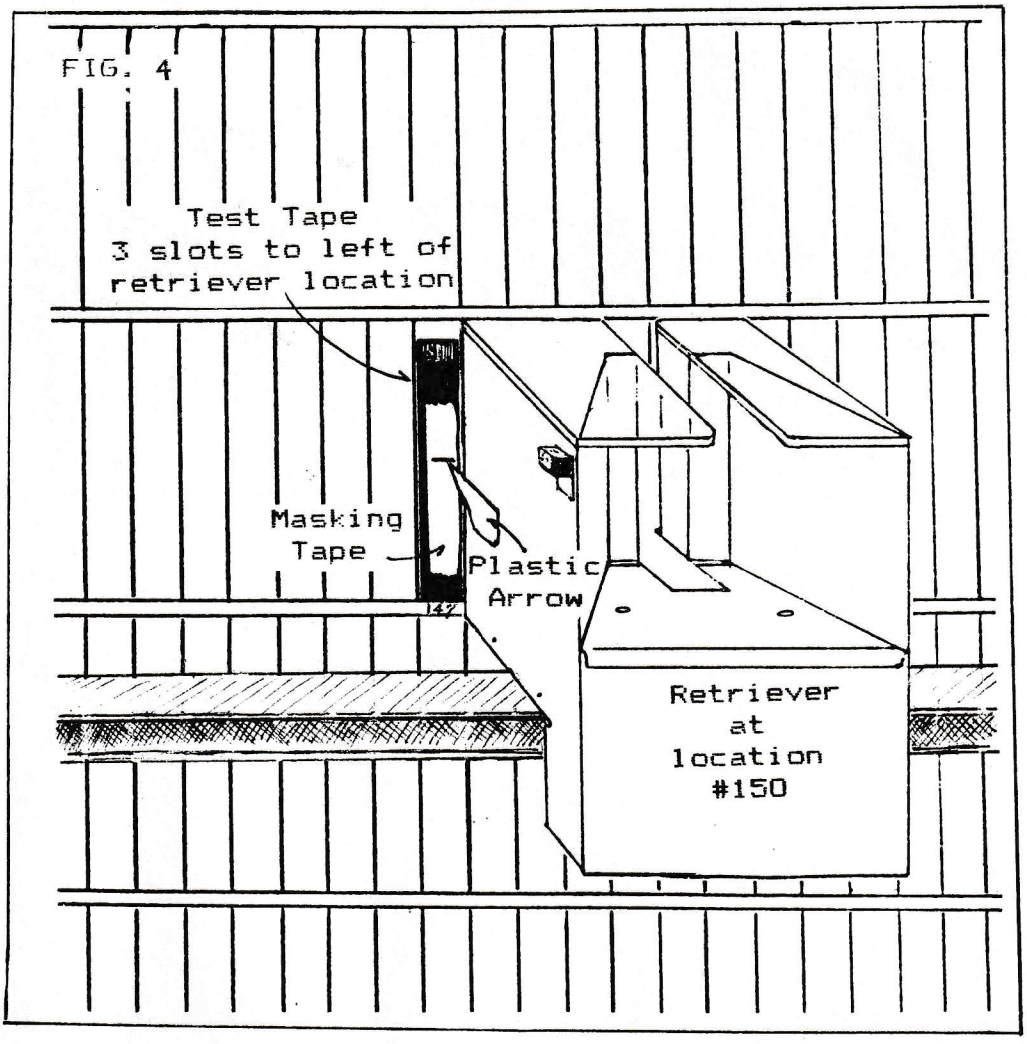


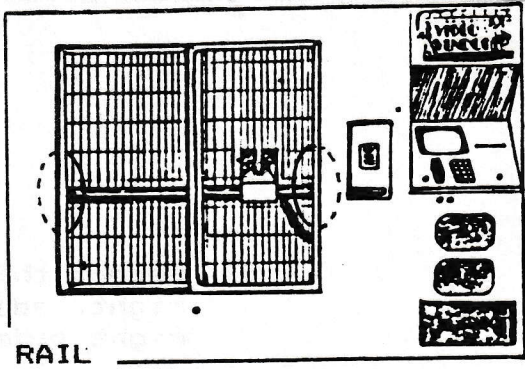

FIG. 4



VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #17

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



FEBRUARY 9, 1987
SUBJECT: SQUARING AND LEVELING THE HORIZONTAL RAIL

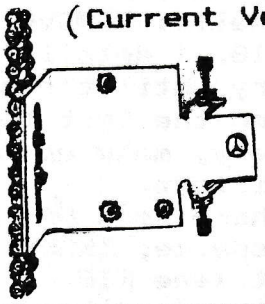
To perform both of these adjustments you will find it necessary to OPEN the side door to the tape storage cabinet and ENTER feature #19 in the sevrice mode.

NOTE: Always check the label reader alignment FIRST, (Bulletin #12), then the squareness of the horizontal rail NEXT, before leveling the rail.

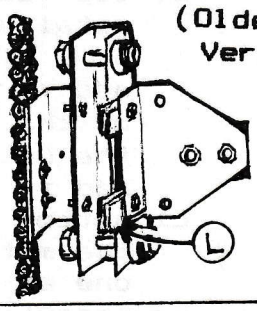
I. The process for SQUARING the horizontal rail depends on the type of support bracket your machine has: (See FIG. 1 )

FIG. 1

A. Cap Screw Adjustable Type (Current Version)




B. Shim Adjustable Type (Older Version)




A. Adjustment to bracket with Cap Screws:

1. Run the retriever all the way to the left on the center shelf and open the large Lexan doors.
2. Place a test tape into the carriage.
3. Hold a metal yardstick or some similar shaped strip of metal vertically against the front edge of the shelves (see FIG. 2, Refer to FIG. 2 for this entire section.)
4. Push the cassette up against the metal strip. If the cassette:
   a) is perfectly FLUSH against the metal strip with no gaps at the top or bottom, the rail is square with the shelves.
   b) top touches the metal, but there is a gap between the metal and the BOTTOM OF THE CASSETTE; Loosen locknut (N), loosen the locknut on (A), loosen the screw (A), loosen the locknut on (B) and tighten the screw B until position of the rail allows no gap between the test tape and the metal yardstick. Snug up screw A and tighten all locknuts: (A), (B) and (N).
   c) bottom touches the metal, but there is a gap between the metal and the TOP OF THE CASSETTE; Loosen locknut (N), loosen the locknut on (B), loosen the screw (B), loosen the locknut on (A) and tighten the screw (A) until position of the rail allows no gap between the test tape and the metal yardstick. Snug up screw (B) and tighten all locknuts: (A), (B) and (N).

5. Repeat this process with the retriever all the way to the right, adjusting the screws on the similar bracket on the right side. (Access via large rear door.)

B. Adjustment to shimmed bracket:

1. Run the retriever all the way to the left on the center shelf and open the large Lexan doors.
2. Place a test tape into the carriage.
3. Hold a metal yardstick or a similarly shaped strip of metal vertically against the front edge of the shelves (see FIG. 2).
4. Push the cassette up against the metal strip. If the cassette:
   a) is perfectly FLUSH against the metal strip with no gaps at the top or bottom, the rail is square with the shelves.
   b) top touches the metal, but there is a GAP between the metal and the BOTTOM of the cassette; REMOVE shims one at a time from lower set (see FIG. 1 detail (L)) and add to the upper set as necessary until the position of the rail allows no gap between the test tape and the metal yardstick. If necessary, make up shims to add if those removed are insufficient.
   c) bottom touches the metal, but there is a GAP between the metal and the TOP of the cassette; INSERT shims one at a time into the lower set (see FIG. 1 detail (L)) removing them from the upper set as necessary until the position of the rail allows no gap between the test tape and the metal yardstick. If necessary, make up shims to add if those removed are insufficient.
5. Repeat this process with the retriever all the way to the right, making shim adjustments on the similar bracket on the right side. (Access via large rear door.)

II. The process for LEVELING the horizontal rail is as follows:

1. Place a test tape with a strip of masking tape applied along its edge into slot #157.
3. Run the retriever to location #160 and position the carriage floor level with the shelf.
4. Using the plastic arrow on the retriever cover (see Service Bulletin #16), carefully mark the spot the arrow points to on the masking tape with a NARROW horizontal line.
5. Remove the test tape and place it into slot #121.
6. Now, run the retriever to the left until the pointer is on the test tape. If the pointer is:
   a) EXACTLY aligned with the mark on the test tape the horizontal rail is level with the shelves.

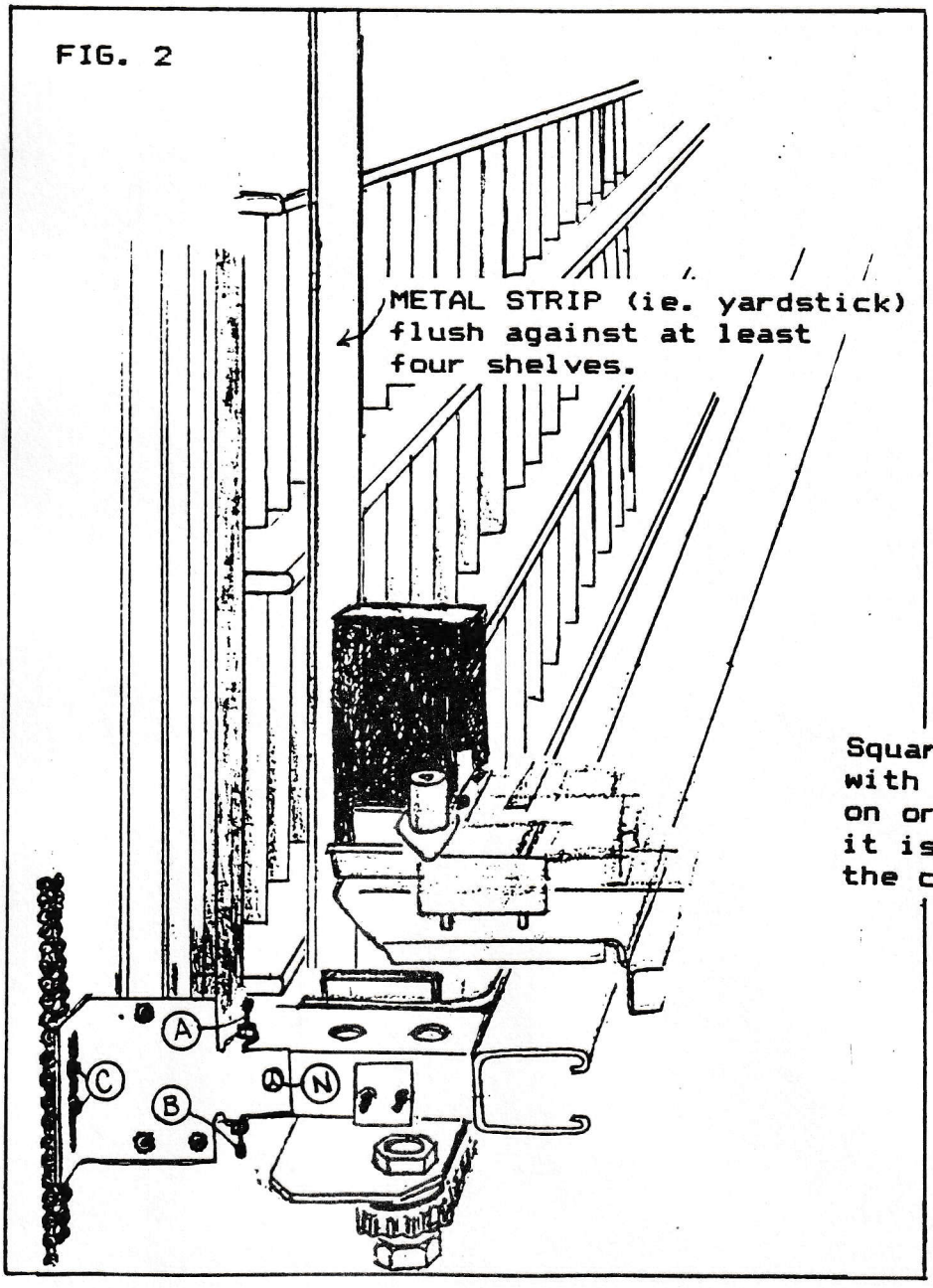
b) pointing ABOVE the mark, adjustment is made while supporting the horizontal rail. Loosen the chain screws (FIG. 2 detail Ⓒ) gently allowing the rail to lower slightly until the retriever arrow points to the mark on the test tape. Retighten the set screws in this position.

c) pointing BELOW the mark, adjustment is made while supporting the rail. Loosen the chain screws (FIG. 2 detail Ⓒ) gently raising the rail until the retriever arrow points to the mark on the test tape. retighten the set screws in this position.

7. Test the machine. If it is functioning properly, close and lock doors and resume rental mode of operation.

NOTE: Whenever it is necessary to make these adjustments to the horizontal rail, the X- and Y-Counts should be rechecked (see Service Bulletin #16).

FIG. 2

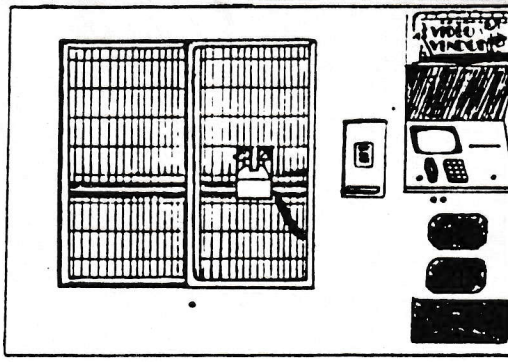



Squaring can be performed with the retriever cover on or off. For clarity, it is illustrated with the cover off.

VIDEO VENDOR
4236 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #18

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑

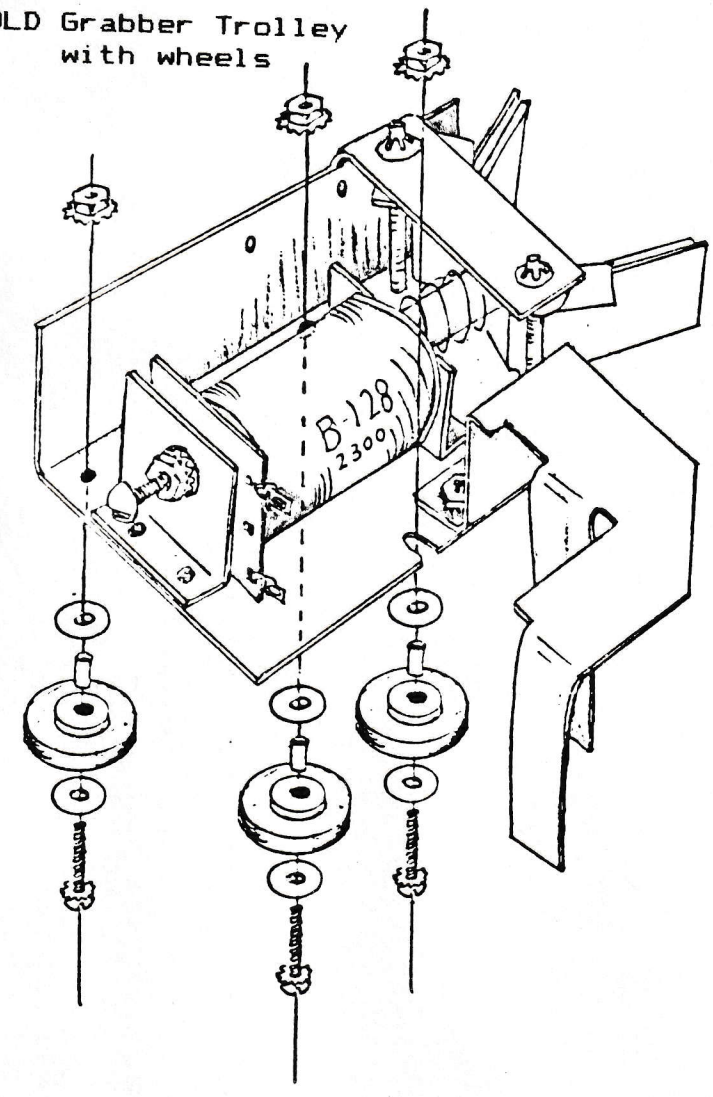


JANUARY 20, 1987
SUBJECT: NEW GRABBER TROLLEY SLIDE GLIDE

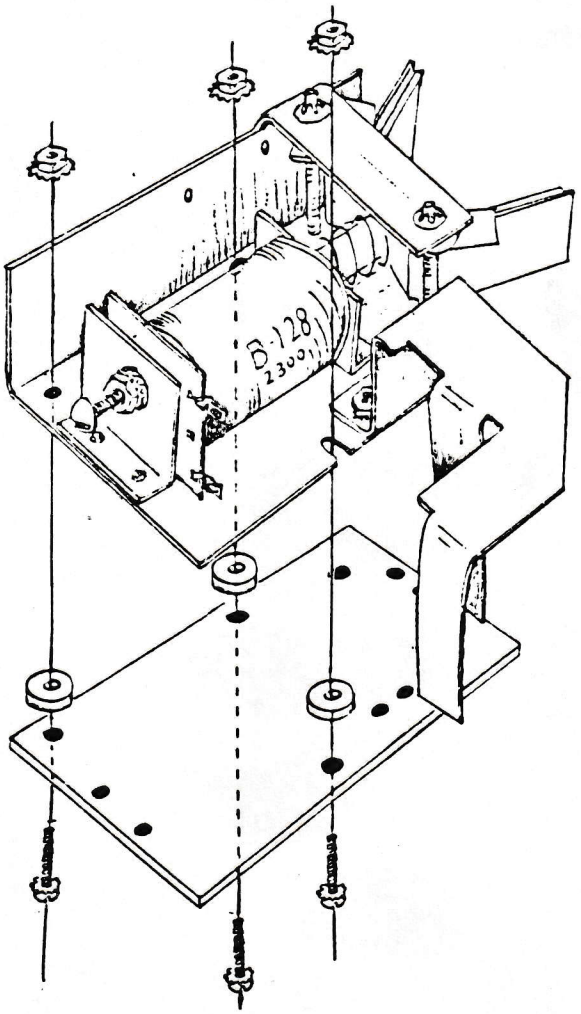
Video Vendor recently redesigned the grabber trolley mechanism. Experience has shown that its wheels needed occasional adjustment and maintenance to insure that the grabber would travel freely and in a straight line when retrieving and returning a cassette.

The new Slide Glide eliminates the wheels and their associated maintenance. It is a direct and easy replacement as illustrated in the self-explanatory diagrams below. The Slide Glide Kit #K1A-2592 is available at $ 7.00 and includes spacers and glide plate.

OLD Grabber Trolley with wheels



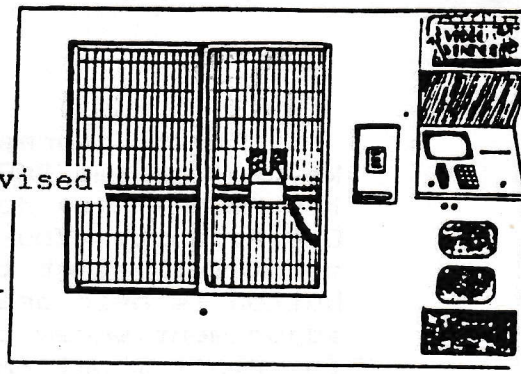

NEW Slide Glide



VIDEO VENDOR
4236 MAIN STREET Service Department
SIDNEY, IL. 60970

# Technical Service Bulletin #19 revised

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓



MARCH 9, 1988
SUBJECT: DOLLAR BILL O.B.A. UNIT 4-50575-01 ADJUSTMENTS

The following instructions are for the adjustments to be made on your O.B.A. unit ONLY if it is not working (fails to accept $1 and $5 bills). **DO NOT** perform these adjustments if your O.B.A. unit is functioning properly.

## I. Motor Speed Adjustment

Open the top service door. Enter Diagnostics, #19. Inside the top service door you will find the O.B. A. Control Unit (See FIG. 1) fastened to the left side of the Vendor wall. On the bottom right of the O.B.A. unit you will see six Function Switches. Function Switch #6 should be the ONLY one "ON" at this point. Just look at the switches to verify that it is on.

First, depress and hold the <-- arrow key on the Vendor keypad (called "MONEY" in Diagnostics). While you are holding the "MONEY" key down, depress and hold the TEST pushbutton on the O.B.A. unit. You can now release the "MONEY" key. The $ Bill motor will start to run and continue to run as long as the TEST button is held depressed. The Fault light goes OFF if the motor speed is within the acceptable range of adjustment.

To adjust the Motor Speed, turn the MOTOR SPEED ADJUSTMENT SCREW clockwise (while still holding the TEST button down) until the Fault light comes ON. Then turn it clockwise until the Fault light goes OFF and comes ON again. The correct setting for the Motor Speed adjustment is midway between these positions.

If your OBA still has trouble accepting one dollar bills, we have found that a slight increase in motor speed (clockwise direction) over the correct setting, clears up that problem.

## II. Magnetic Gain Adjustment

Open the top service door. Enter Diagnostics, #19. Inside the top service door you will find the O.B.A. Control Unit fastened to the left side of the Vendor wall. On the bottom right of the OBA unit you will see six Function Switches. Function Switch #6 should be the only one ON at this point. Turn Switch #6 OFF so that ALL switches will now be in the OFF position.

First, depress and hold the <-- arrow key on the Vendor keypad (called "MONEY" in Diagnostics). While you are holding the "MONEY" key down, depress and hold the TEST pushbutton on the O.B.A. unit. You can now release the "MONEY" key. The $ Bill motor will start to run and continue to run as long as the TEST button is held depressed. At this point, turn the MAG. GAIN adjustment screw counterclockwise to the maximum position. If the Fault light comes on, the control should be backed off 1/8 turn. Release the TEST pushbutton and put Function Switch #6 back in the ON position.

## III. Cleaning

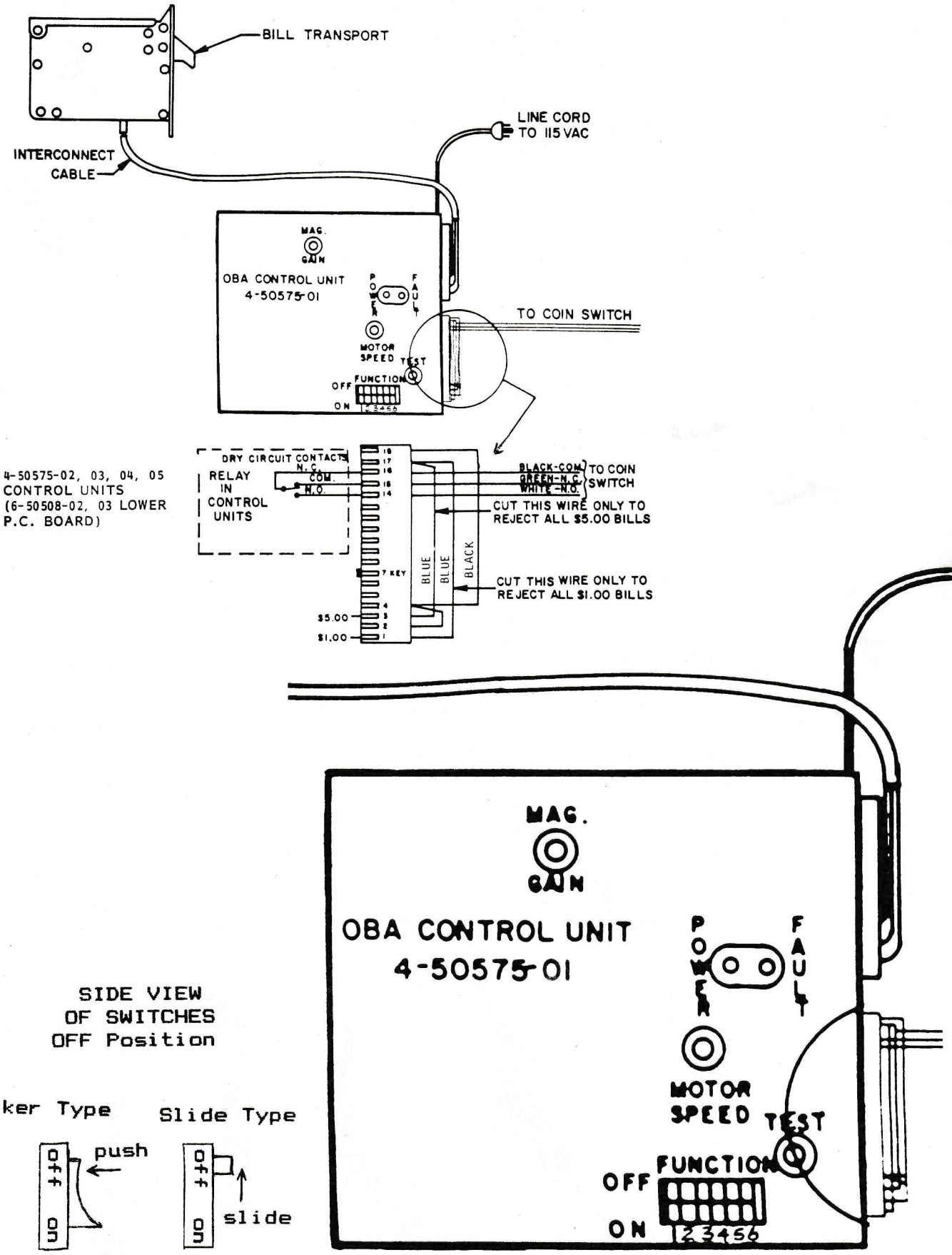
The $ Bill Acceptor does not require routine claening, however, the input and track surface could be wiped with a clean cloth periodically. Due to the abrasive nature of currency, the magnetic head does not normally require cleaning. If the head does become dirty, use a clean cotton swab saturated with denatured alcohol or other suitable cleaning solution. Never soak the belts in any cleaning solvents. You can also use compressed air to blow out any dust if your unit operates in an extremely dusty environment.

## IV. Lubrication

The $ Bill Acceptor does not require lubrication under normal use. If the belts turn hard or squeek, apply one drop of light machine oil (such as 3:1 Electric Motor Oil or equivalent) to the gear shaft, each nyliner bearing and each roller for the upper and lower belts and drive belt. The rollers for the lower belts and drive belt can be reached with a needle oiler.

**Do not overlubricate.**

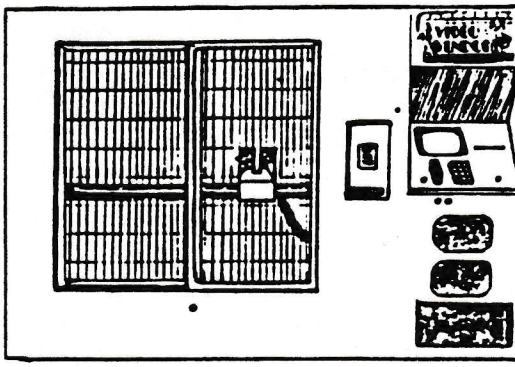
FIGURE 1


BILL TRANSPORT
LINE CORD
TO 115 VAC
INTERCONNECT
CABLE
MAG.
GAIN
OBA CONTROL UNIT
4-50575-01
POWER
FAULT
MOTOR
SPEED
TEST
FUNCTION
OFF
ON
1 2 3 4 5 6
TO COIN SWITCH
4-50575-02, 03, 04, 05
CONTROL UNITS
(6-50508-02, 03 LOWER
P.C. BOARD)
DRY CIRCUIT CONTACTS
RELAY
IN
CONTROL
UNITS
N.C.
COM.
N.O.
BLACK-COM.
GREEN-N.C.
WHITE-N.O.
TO COIN
SWITCH
CUT THIS WIRE ONLY TO
REJECT ALL $5.00 BILLS
CUT THIS WIRE ONLY TO
REJECT ALL $1.00 BILLS
BLUE
BLUE
BLACK
7 KEY
$5.00
$1.00
SIDE VIEW
OF SWITCHES
OFF Position
Rocker Type
Slide Type
push
slide
off
on

VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #20

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓



MAY 21, 1987
SUBJECT: UNSTUCK TITLE LABELS

We have noticed that the Title Labels on the spines of cassettes can begin to peel up (See FIG. 1) and can cause retriever "Error 99" problems.

It usually occurs while the retriever is returning a tape. As the grabbers slide the tape back on the shelf, the exposed sticky area on the upturned Title Label or on the cassette sticks to the grabber (See FIG. 2). When the grabber retracts, the cassette is pulled partially back into the retriever. If the cassette blocks the Tape Front and Tape Top sensors, the computer interprets as a tape jammed in the transport. You get an "Error 99" indicating either Tape Front or Tape Top as the problem. If the tape is pulled out, but not far enough to block the sensors, the retriever in motion may hit the protruding cassette and cause a jammed condition. The result of the jam could be a tape jammed sideways between the retriever and the tape cabinet or you may find a tape on the floor of the wooden cabinet with no explanation for why it's there.

The corrective action is to inspect your tape inventory and replace all stickers or Title Labels that appear loose before they become a problem.

FIG. 1

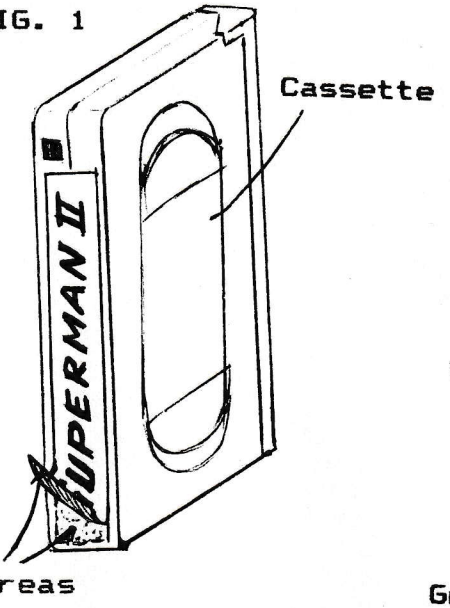
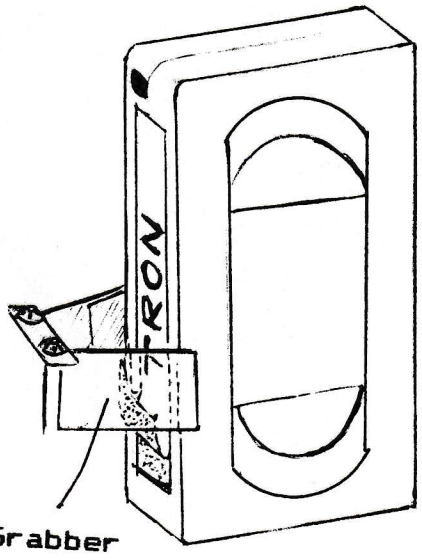


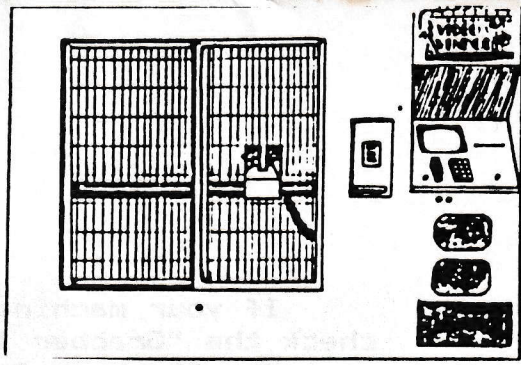

FIG. 2



VIDEO VENDOR
4238 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #21

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



JUNE 11, 1987

SUBJECT: SETTING THE "GRABBER IN" AND "GRABBER OUT" STOPPER SWITCHES AND CASSETTE POSITIONING ON SHELVES

The "Grabber In" (FIG. 3) and "Grabber Out" (FIG. 4) switches have two specific functions. The first is to send electrical signals to the MPB (Main Processor Board) indicating that the grabber mechanism has reached either of its outer limits. Second, they physically stop the movement of the grabber in and out at its outer limits.

The grabber switches are preset at the factory to allow the cassette tapes to overhang the shelf somewhere between 1/16" and 1/8". This is done to accommodate "sales cassettes" in their packaging which is about 1/8" longer than a cassette without the packaging. The Rental movie cassettes SHOULD NOT touch the back wall of the tape compartment. Because the tape shelves are in a wooden cabinet they cannot be perfectly square with the horizontal beam. Although it is normal for the tapes to overhang the shelf between 1/16" to 1/8", you must rent and return a tape from each shelf to determine the amount of overhang for that shelf. The returned tape will be placed in the proper position which should be used as a guide for tapes placed on that shelf by hand.

The following symptoms indicate grabber switches out of adjustment:

1. While renting a tape, the grabber moves in to pull the tape off the shelf but the grabber contacts the tape before it contacts the forward black micro-stop-switch, the cassette will not be pulled out to be vended. The customer will then get this message on the monitor:

   I CAN'T FIND THAT TAPE
   PLEASE WAIT AND TRY AGAIN.

2. While renting, the grabber pulls the cassette off the shelf. In one case it pushes the cassette back onto the shelf again, (instead of bringing it to the access door to vend). The customer will then get the same message as in #1 above. In another case, the grabber tries to reshelve the cassette but because the transport is lower than the shelf, it cannot be put back. Instead, the cassette will be repositioned which will correct the error indicatation. In this case, the tape will be brought to the access door for vending.

   In either case, the problem resulted because the rear stop switch (Grabber Out) was contacted before the "Tape Back" electric eye beam could "see" the cassette and the Vendor did not get an indication that the cassette was brought far enough out into the retriever. This condition can be caused by a tape being pushed too far back by a service person or by a misadjusted "Grabber Out" switch.

3. A sticky title identifier label can cause problems which exhibit a misadjusted grabber switch (See Service Bulletin #20).

If your machine exhibits any of these problems you should check the "Grabber In" and "Grabber Out" adjustments as follows:

The "Grabber In" switch can only be adjusted properly in only ONE place in the machine. That is the shelf location where the horizontal beam is at the closest distance to a shelf (See FIG. 1). You will have to move the bar in front of all eight shelves and measure each to find the location where the bar is closest to a shelf. Once you have found the closest point, that will be the location where you will adjust the "grabber in" micro- switch.

The grabber "In" and "Out" switches are located inside the Retriever's stainless steel, box shaped housing. To uncover the grabber switches, you must first move the retriever to a convenient location in the machine. To do this, open the top service door and enter Feature #19, Diagnostics. Run the retriever up to location #150. Open the Lexan doors. Remove the four screws from the sides of the retriever cover (two on each side). Turn OFF the AC power. Carefully, lift off the cover and note how the wires are tucked under the Z Motor housing. Unplug (by pulling apart) the white connector on the wires between the retriever and its cover. You can now completely separate the retriever cover from the retriever mechanism which will expose the grabber "In" and "Out" switches. See FIG. 3 & 4.

You must now move the retriever to the location which was found to have the closest distance between the horizontal bar and the shelf. Cheat the Lexan door interlock switch so you can operate the machine with the doors open. Turn ON the AC power and re-enter Feature #19. Move to the location where the adjustment will be made. Move the grabber forward and back (in and out) using the #7 and #9 buttons on the keypad. You will notice that the grabber stops whenever its "legs" contact either black "stopper" microswitch.

Run the grabber in toward the shelf. It should be stopped by the "Grabber In" microswitch about 1/16" before the grabber appendage hits the shelf. If it stops too soon or if it hits the shelf, adjust the "Grabber In" microswitch. To do this, loosen the two screws (See FIG. 3) holding the switch bracket and move the bracket to the proper position to achieve the 1/16" gap. See FIG. 2. Tighten the screws and retest the grabber action.

The "Grabber Out" switch can be adjusted anywhere in the machine so pick a convenient location. Check the "Grabber Out" switch by pulling it all the way back. Put a tape in the retriever and slide it forward. You want the tape to move forward at least 1/8" or more before exposing the Tape Back electric photo cell as observed on the screen in Feature #19. If you do not have at least 1/8", unscrew the two lock nuts on the "Grabber Out" switch bracket and slide the bracket and switch slightly to the rear (away from the shelf). See FIG. 4. Tighten the screws and retest the grabber action. Close up the machine and test rentals from all corners of each shelf.

FIG. 1

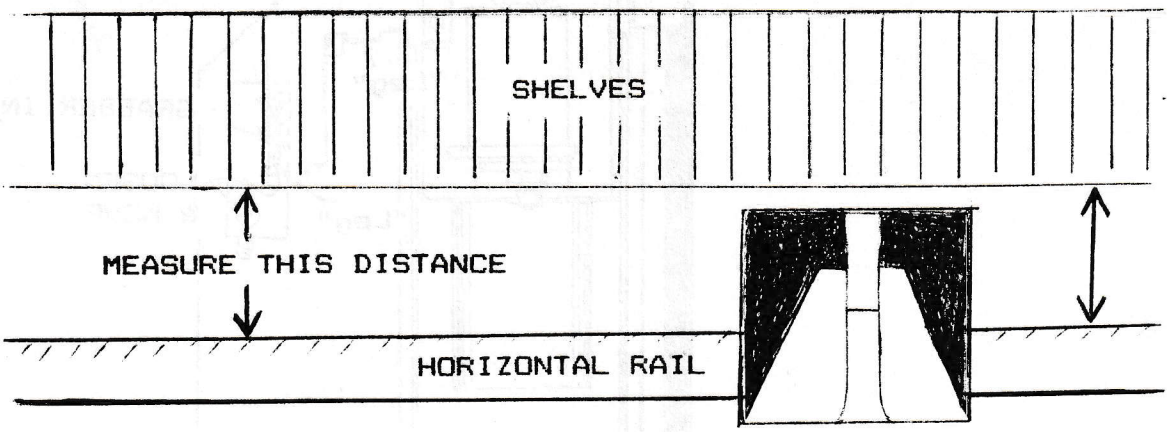

SHELVES
MEASURE THIS DISTANCE
HORIZONTAL RAIL

FIG. 2

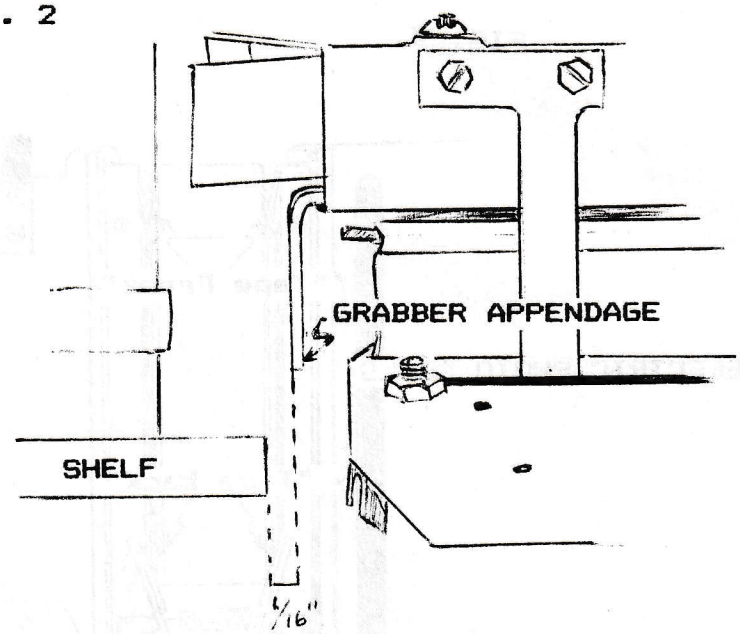

GRABBER APPENDAGE
SHELF
5/16"

FIG. 3

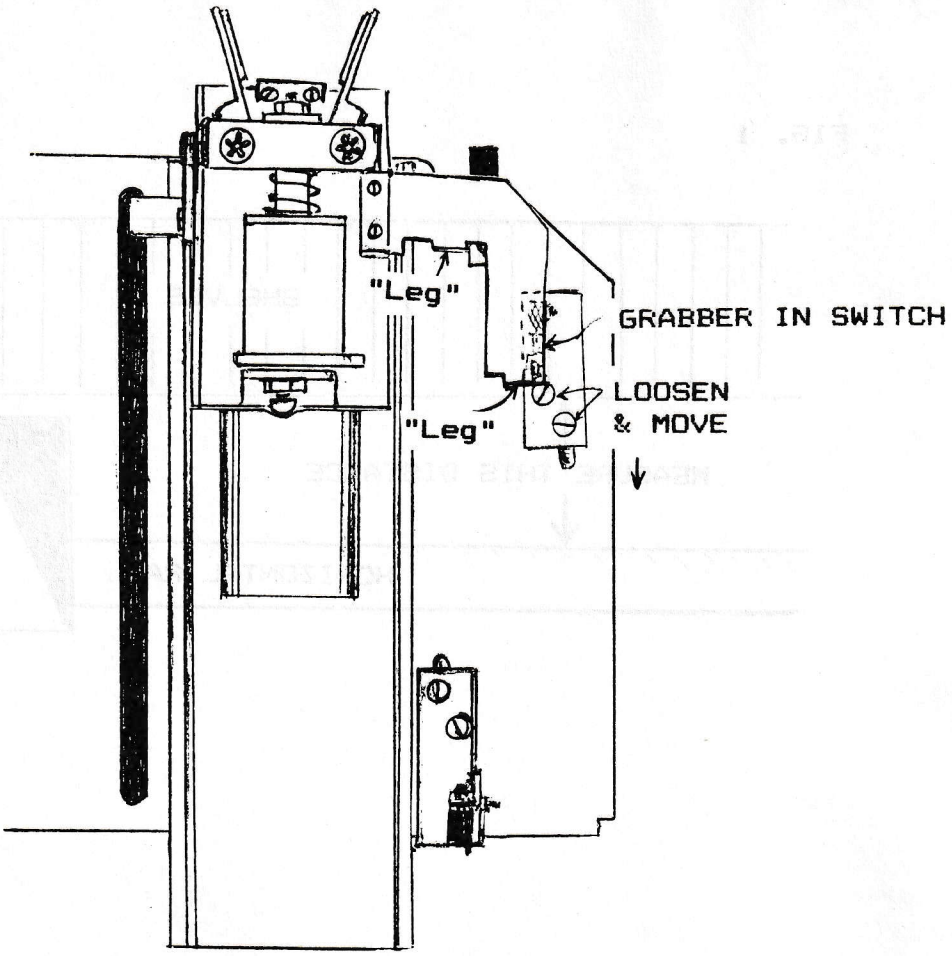
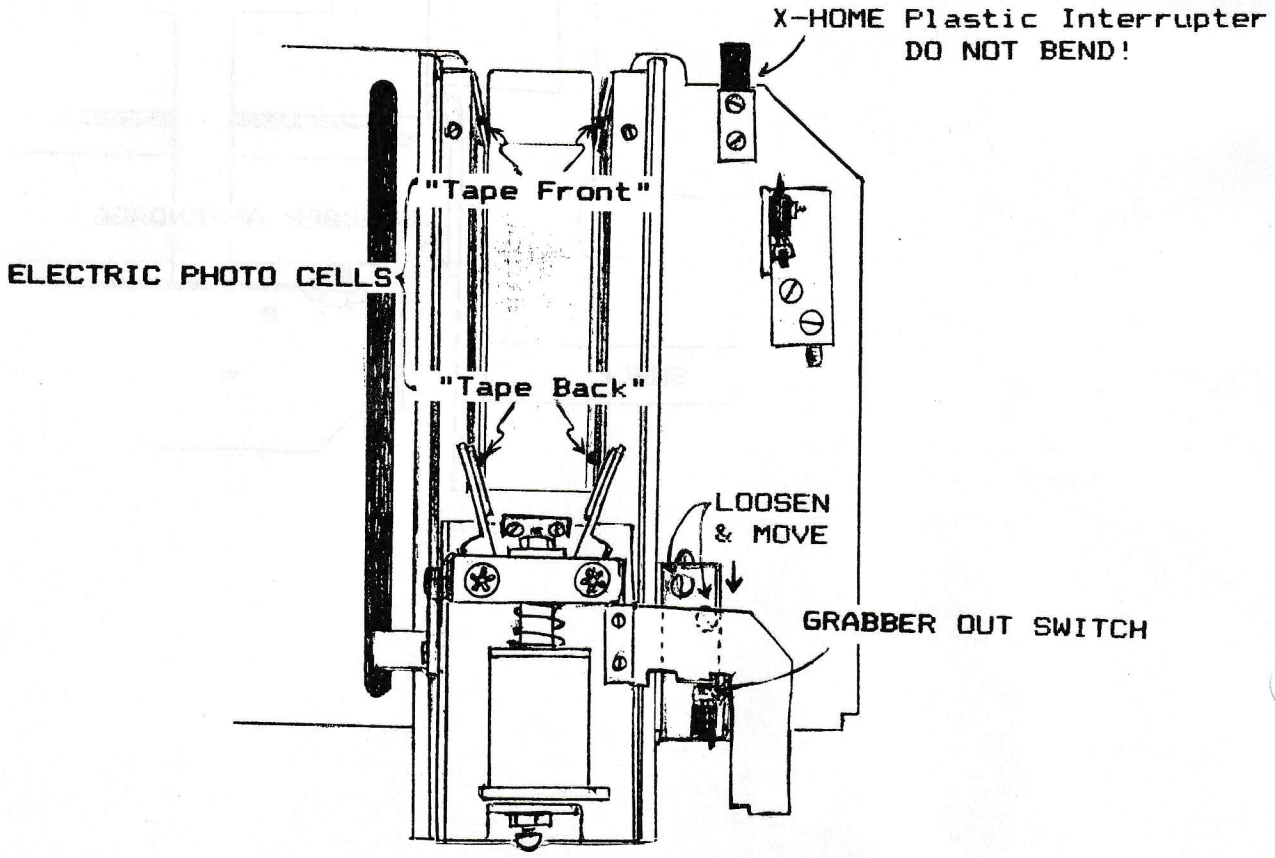

"Leg"
GRABBER IN SWITCH
LOOSEN
& MOVE
"Leg"

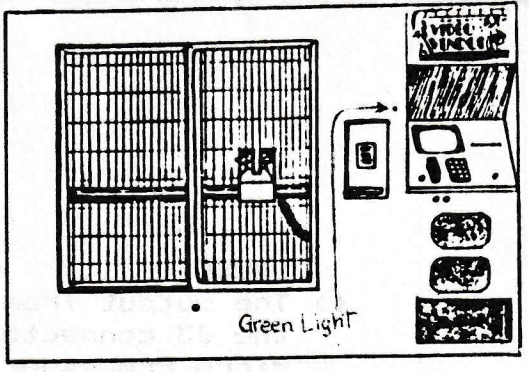
FIG. 4


X-HOME Plastic Interrupter
DO NOT BEND!
"Tape Front"
ELECTRIC PHOTO CELLS
"Tape Back"
LOOSEN
& MOVE
GRABBER OUT SWITCH

VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #22

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑




JUNE 26, 1987
SUBJECT: THE GREEN LIGHT AND ACCESS DOOR OPERATION

The Green Light is a visual indicator which lights when the cassette access door is to be opened by a customer on either rental or return of a video cassette. The light is located on the front of the Vendor just to the right of the access door (See DIAGRAM in Heading).

This bulletin describes the conditions that may cause the failure of the Green Light to light. For more information on testing (2) d, e & f see Service Bulletin #13a: Testing the MCB.

(1) IF the Vendor works normally but the green light does not light when renting or returning a cassette and the customer CAN open the access door.

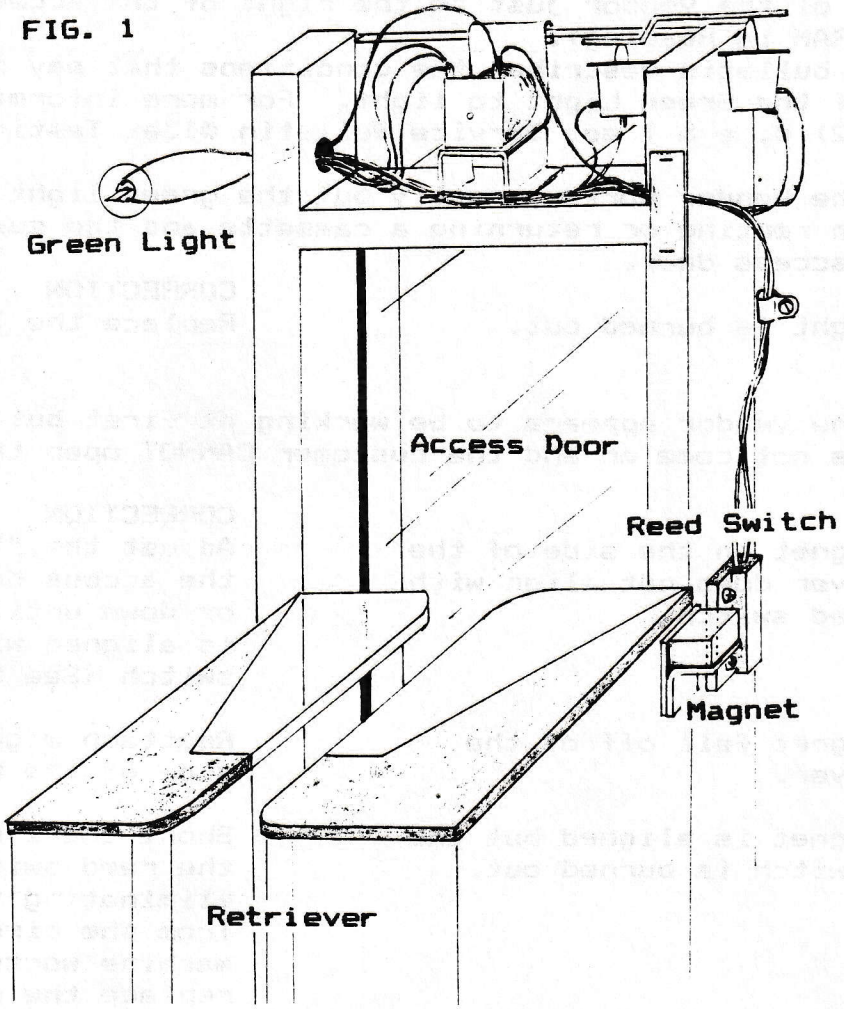
| CAUSE | CORRECTION |
|---|---|
| The light is burned out. | Replace the light. |

(2) IF the Vendor appears to be working at first but the green light does not come on and the customer CANNOT open the access door.

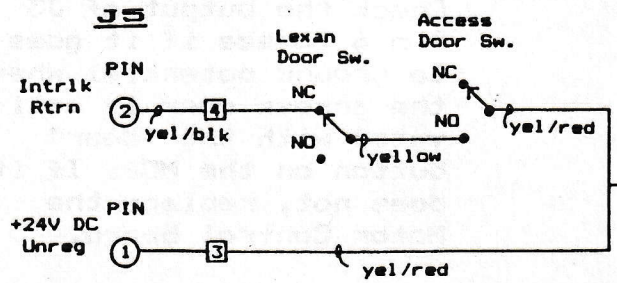
| CAUSE | CORRECTION |
|---|---|
| a) The magnet on the side of the retriever does not align with the reed switch. | Adjust the "Y Count" for the access door (999) up or down until the magnet is aligned with the reed switch (See FIG. 1). |
| b) The magnet fell off of the retriever. | Reattach magnet to the side of the retriever. |
| c) The magnet is aligned but the reed switch is burned out. | Short the 2 wires on the reed switch together eliminating the switch from the circuit. If the machine works properly replace the reed switch. |
| d) Jumpers were left in the J5 interlock (Pins 1 & 2) of the Motor Control board. (MCB) | Remove the jumper and replace the J5 plug. |
| e) The output from Pin 6 of the J3 connector on the MCB does not go to ground. | Check the output of J3 Pin 6 to see if it goes to ground potential when the access door is activated with the "door" button on the MCB. If it does not, replace the Motor Control board. |

| CAUSE | CORRECTION |
|---|---|
| f) The output from Pin 1 of the J3 connector on the Micro Processor Board (MPB) does not go to ground when key #1 on the keypad is pressed while in Diagnostics, Feature 19. | Check the output of J3 Pin 1 of the MPB to see if it goes to ground potential when key #1 on the keypad is pressed while in Diagnostics, Feature 19. If it does not go to ground, replace the MPB. |

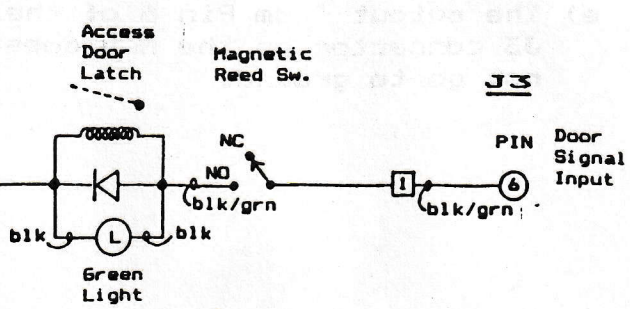
FIG. 1




MOTOR CONTROL J5 INTERLOCK



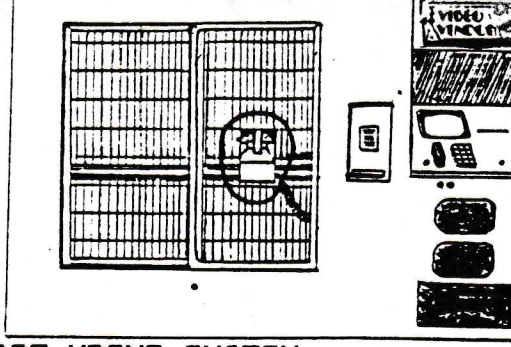

TAPE ACCESS DOOR SOLINOID OPERATION



VIDEO VENDOR
4226 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin #23

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



JULY 13, 1987
SUBJECT: ADJUSTING THE SENSITIVITY OF THE TAPE WRONG SWITCH

The Tape Wrong switch is located under the triangular shaped, metal plate inside the retriever mechanism (See FIG. 1, detail a). It is used to detect the insertion of two tapes simultaneously or a tape incorrectly placed in the retriever. It operates similar to a weight scale in that anything placed on it weighing more than 2 1/2 oz. sets it to a YES condition as observed on the monitor in Feature 19, Diagnostics.

This bulletin describes the conditions when:
I. The Tape Wrong switch incorrectly imdicates a "Tape Wrong" condition, and
II. The Tape Wrong switch fails to detect a tape.

I. CONDITION: Tape Wrong= YES when no tape is present.

A customer rents a tape, the retriever gets the cassette, it is validated and the customer removes the cassette from the machine. As the customer closes the door the beeper sounds continuously and the following message appears on the monitor screen although no tape is in the retriever.

THIS TAPE IS IN WRONG!
FOLLOW DIAGRAM ABOVE DOOR.
PLEASE REMOVE IT, AND TRY AGAIN.

To correct this condition, turn power OFF, open service door, power ON, enter Feature 19: Diagnostics. Check sensor switches for error. If Tape Wrong= YES with no tape in the retriever, one or more of the sensors on the membrane switch may be too sensitive.

To check and if necessary, correct the sensitivity of the actuation pads on the membrane switch, perform the following:
1. While still in Diagnostics, move retriever to a workable position using the keypad keys.
2. Open the Lexan doors and remove the four screws (two on each side) of the retriever cover (See FIG. 1, detail b).
3. Lift off the cover to remove the two nuts from beneath (See FIG. 1, detail c) taking care to disturb wiring as little as possible. Beneath the triangular metal plate is the membrane switch (FIG. 3)- Note positions of sensing areas. Testing, however, is done with the metal plate ON. Do not remove it yet.
4. A 2 oz. weight approx. 3 in. long (a 2 in. block of common pine 2"x4" for example) will be needed to perform the following:
a) To test switch #1 (Refer to FIG. 2 for testing positions) place the 2 oz. block along positions A, B, & F while watching the Tape Wrong indicator in Diagnostics. If YES appears for all positions, the Actuation pad for switch 1 may need to be moved off center (to desensitize it).

b) Before moving, test the other switches that indicated YES to determine if the other switchs are too sensitive.

c) To test switch: place block along positions:

| | |
|---|---|
| #2 | B, C & F |
| #3 | A, D & F |
| #4 | C, D & E |

The Tape Wrong switch is determined to be too sensitive when any combination of lettered test positions signal YES.

To desensitize a sensor, you must expose the membrane switch.
1. Lift out the triangular, metal plate leaving the loose shoulder bolts in place in it.
2. Gently peel up the actuation pad (See FIG. 3) from the sensing area(s) determined to be too sensitive and move it slightly off center. The more CENTERED an actuation pad is on its sensing area, and the SMALLER the diameter of the pad, the more SENSITIVE is that switch. Using a larger diameter Actuation pad will also desensitize the switch.
3. After making the necessary Actuation pad adjustments, replace the metal plate and shoulder bolts (do not tighten with nuts).
4. Move the 2oz. weight along all the lettered positions shown in FIG. 2 while checking that Tape Wrong= NO in Diagnostics. Continue to make slight adjustments to oversensitive switches until Tape Wrong= NO with weight at all lettered positions.
5. To test the Tape Wrong indicator use the lightest cassette -usually a short childrens' tape. Place the tape on the metal plate (See FIG. 4) vetically, leaning to the left and leaning to the right, check the Tape Wrong indicator in Diagnostics. Tape Wrong should read YES if switches are correctly adjusted.
6. When indicators read correctly, replace nuts under shoulder bolts and secure retriever cover with its four screws.

II. CONDITION: Tape Wrong= NO with two tapes present on retriever or one tape in retriever wrong.

A customer inserts two tapes in the retriever and the machine does not detect the error. To correct this situation, follow the steps described above except the remedy is to make the switch MORE sensitive. Therefore, you would move an Actuation pad closer to the center of its sensing area or use a smaller diameter Actuation pads to make the switch more sensitive.

FIG. 1

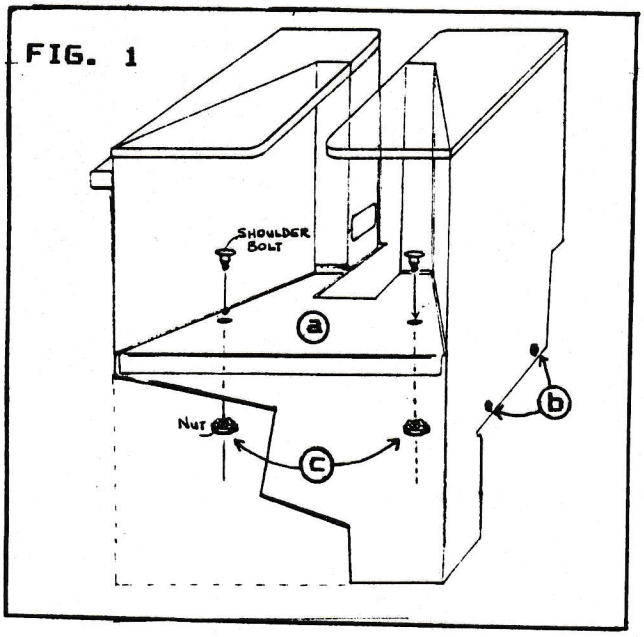



FIG. 2

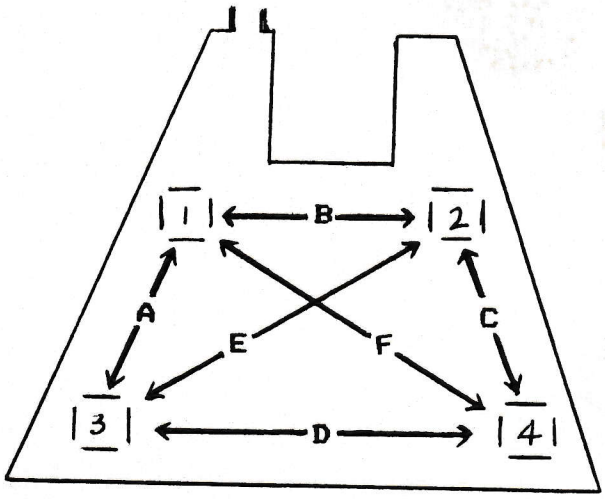



FIG. 3

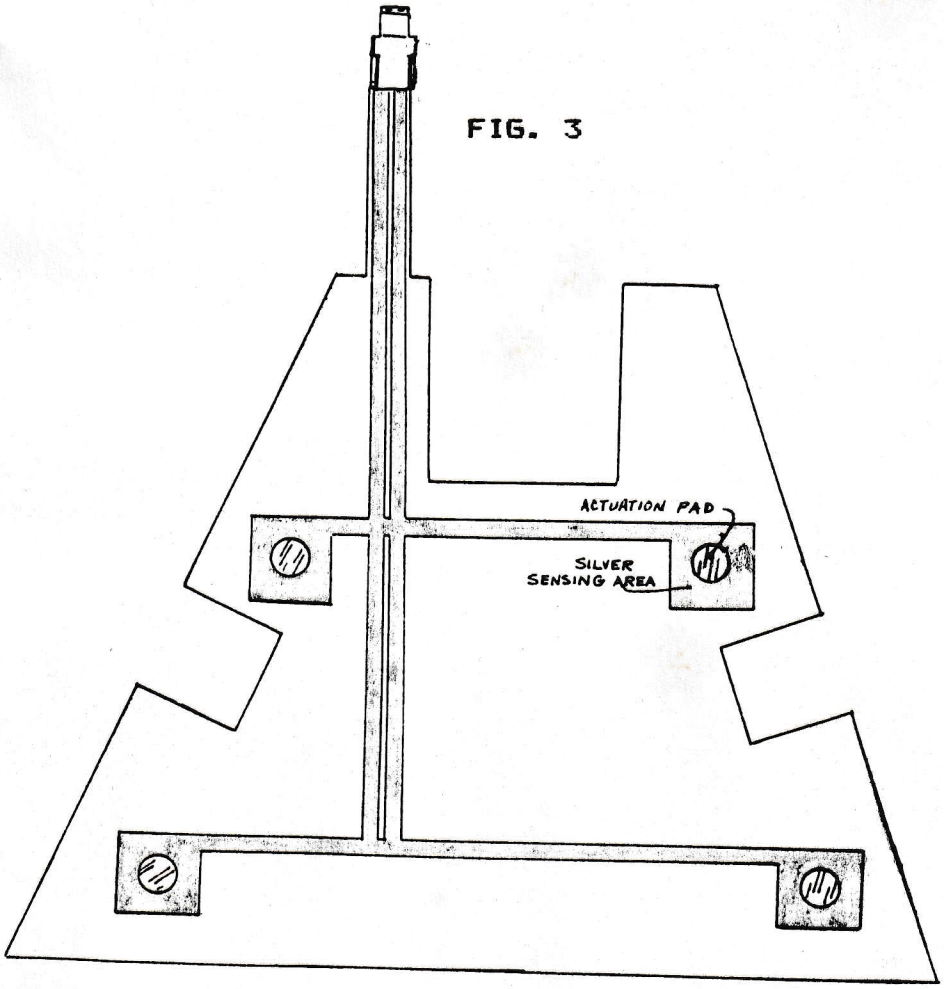
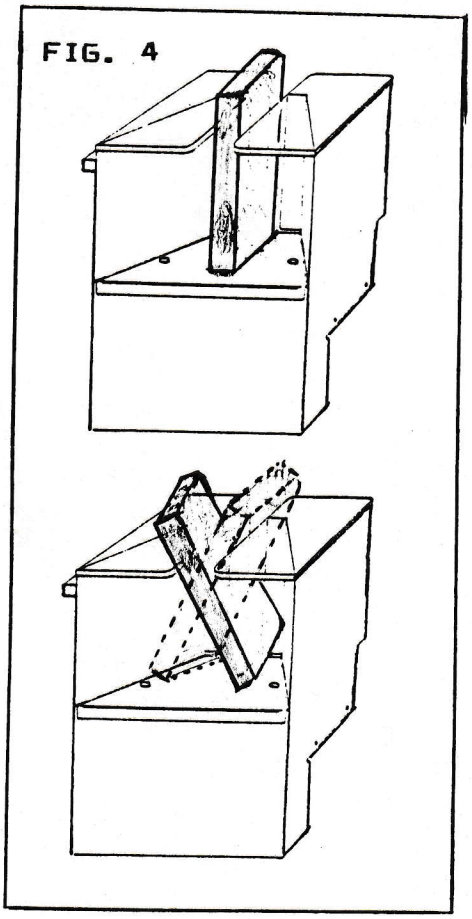


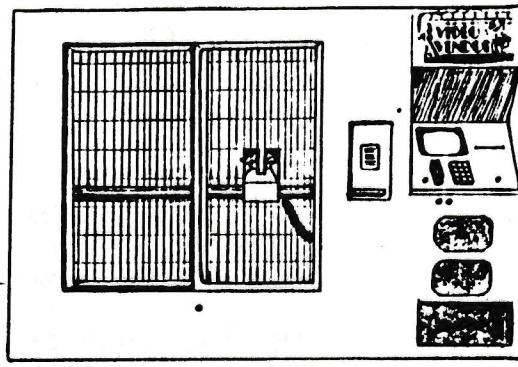

FIG. 4



VIDEO VENDOR
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin #24

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



AUGUST 17, 1987
SUBJECT: PREVENTIVE MAINTENANCE CHECKLIST

This bulletin will provide you with a preventive maintainance checklist for a periodic (monthly) systems check of your Video Vendor. The following checklist is the one used by our service department and we trust it will be helpful to you.

VIDEO VENDOR DATE / / PREVENTIVE MAINTENANCE

LOCATION_____ SERIAL #_____

---

1. Check SLIDING GLASS DOORS to insure that they lock properly and slide easily. Check the INTERLOCK SWITCH to make sure that mechanism won't move when door is open. 1 ☐

2. Switch power ON. Check MONITOR adjustment. 2 ☐

3. Check FLUORESCENT LIGHTS. 3 ☐

4. Make sure that both SERVICE DOOR SWITCHES work checking ONE DOOR AT A TIME. 4 ☐

5. Check ALL KEYBOARD switches. 5 ☐

6. Check that that LABEL READER HOLES line up with the encoder cover. Make sure that the MECHANISM is lined up with the center of the access door bracket. Check Service Bulletin #12 for details. 6 ☐

7. CLEAN and MAINTAIN the horizontal and vertical RAILS according to Bulletin #1 or #1 revised. 7 ☐

8. Check TRANSPORT COILED CORD for proper dress to prevent hooking on cross rail. See Bulletin #9. 8 ☐

9. Check TAPE TOP, FRONT, BACK and WRONG sensors. 9 ☐

10. Check the GRABBER action and BODY SENSOR action. CLEAN GRABBER PADS using acetone (nail polish remover). 10 ☐

11. Run TRANSPORT to Position 81 and confirm SQUARENESS of transport platform to cassette compartment frame. See Bulletin #17 for details. 11 ☐

12. Check paper feed LEVER. 12 ☐

13. Make sure HOME SHUTTERS and X & Y COUNTER ENCODERS pass through middle of interrupter module. See that MENUS change quickly. See Bulletin #7 13 ☐

14. Using CREDIT, Rent tapes in CENTER and ALL FOUR CORNERS of machine. Test both BETA and VHS tapes. Listen for any UNUSUAL NOISE. Check Money Feeder using $1 & $5 bills. 14 ☐

15. See that GREEN LAMP lights when access door opened. Check MAGNET ALIGNMENT at Reed Switch. 15 ☐

16. Check ACCESS DOOR for proper locking and tamper proofing. 16 ☐

17. Visual check for ANY LOOSE screws, nuts or wires. Check STOPS on horizontal rail. 17 ☐

18. Make sure WOODEN DOORS close snugly and easily. 18 ☐

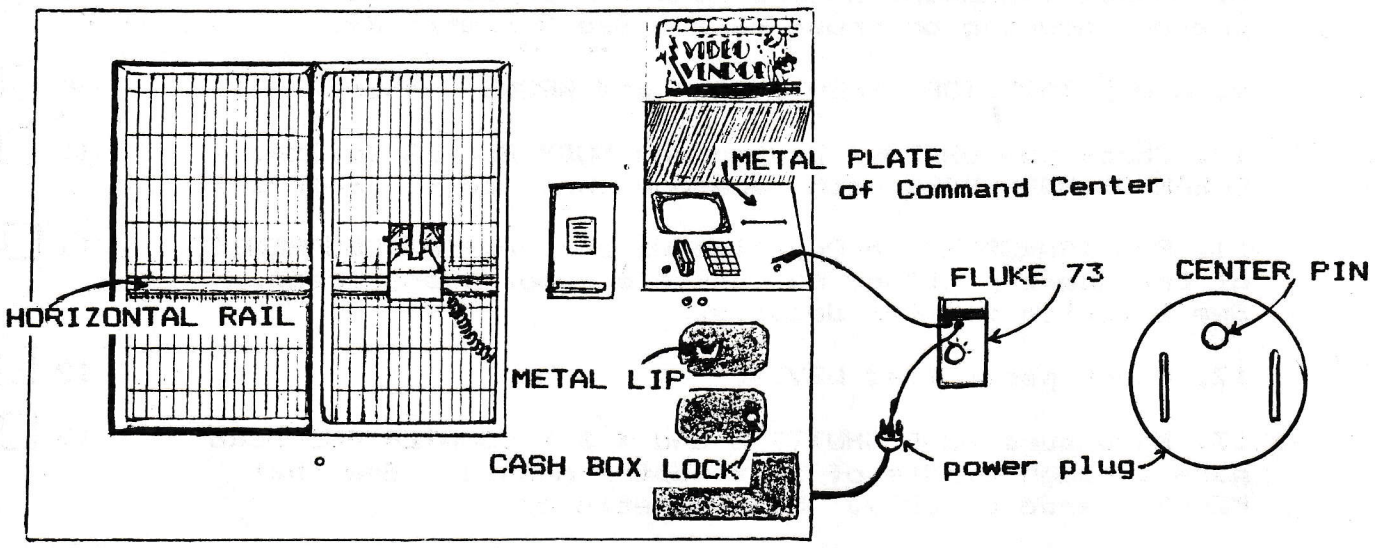
---

Once on new installation and twice a year thereafter the electrical GROUNDING of the machine should be checked.

Check WALL OUTLET for proper ground, hot and neutral. Use a ground fault detecter available at most hardware stores for about $6.00.

To check the machine grounding, you can use any quality multimeter. We use the FLUKE 73 Multimeter. Switch Video Vendor power OFF and remove the power plug from the wall. Set meter to OHMS. With one lead on the CENTER PIN of the cord's power plug, and the other lead touched to the METAL PLATE of Command Center and then to the CASH BOX LOCK, the meter should read 470 K Ohms (0.47 million Ohms) at each.

Keeping one lead on the center pin, touch the other lead to the COIN DOOR, METAL LIP of the bill acceptor and HORIZONTAL RAIL and the meter should read approx. zero Ohms, or in other words, full continuity to ground connection. Move the lead from the center pin to one of the flat prongs of the power plug and the readings taken from the COIN DOOR, METAL LIP and RAIL should be 1 million Ohms minimum.



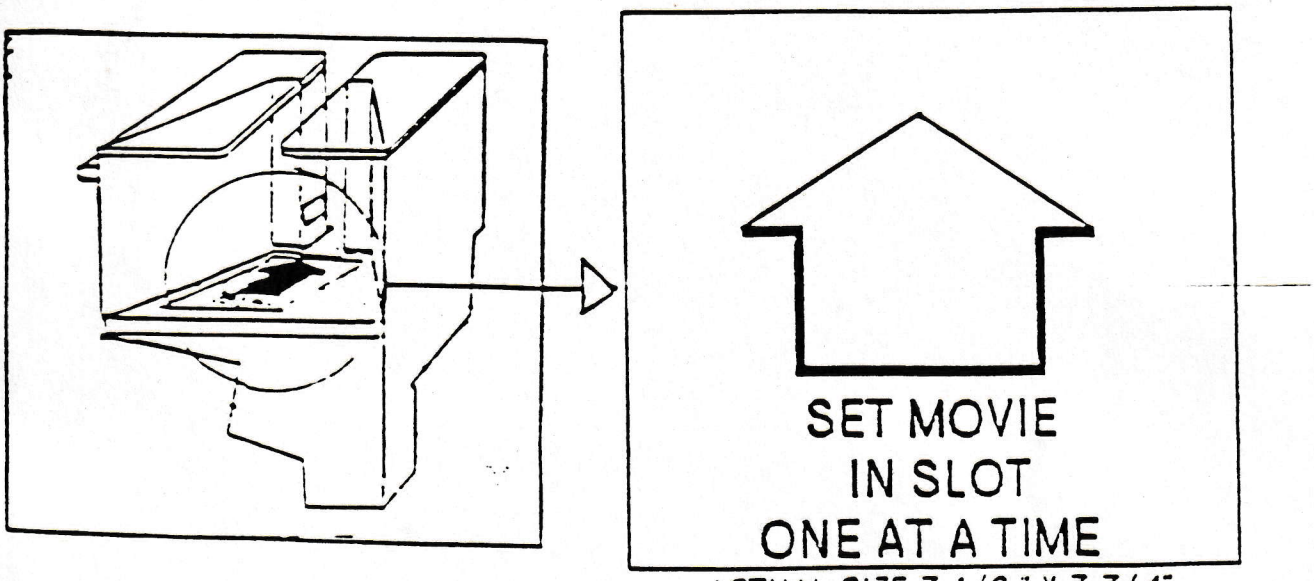
VIDEO VENDOR
4235 MAIN ST SERVICE DEPARTMENT
SKOKIE, IL. 60076

# TECHNICAL SERVICE BULLETIN # 25

OF INTEREST TO

GENERAL MANAGER SALES MANAGER SERVICE MANAGER PARTS MANAGER SERVICE TECHNICIANS

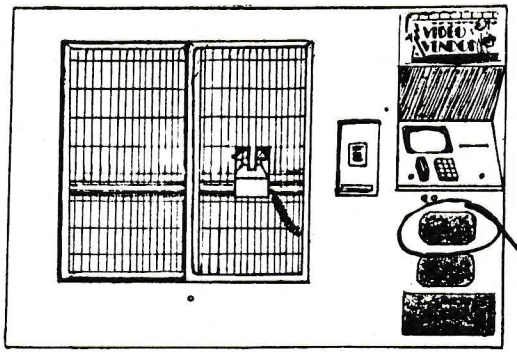
THE STICKER PICTURED BELOW IS NOW AVAILABLE AT $1.00 EACH, PART #X-724. IT IS DESIGNED TO SELF STICK ON THE TRANSPORT FLOOR TO HELP DIRECT THE CUSTOMER IN RETURNING MOVIES. WE RECOMMEND THAT YOU PUT ONE ON EACH OF YOUR MACHINES.




ACTUAL SIZE 3 1/2" X 3 3/4"
COLOR: RED LETTERING ON WHITE PAPER

VIDEO VENDOR, INC
4235 W. MAIN ST.
SKOKIE, ILLINOIS 60076
(312) 982-0440

# TECHNICAL SERVICE BULLETIN #26 revised



**ATTN: SERVICE DEPARTMENTS**

MARCH 9, 1988

**SUBJECT: DOLLAR BILL VALIDATOR REFUSING TO ACCEPT ANY BILLS.**

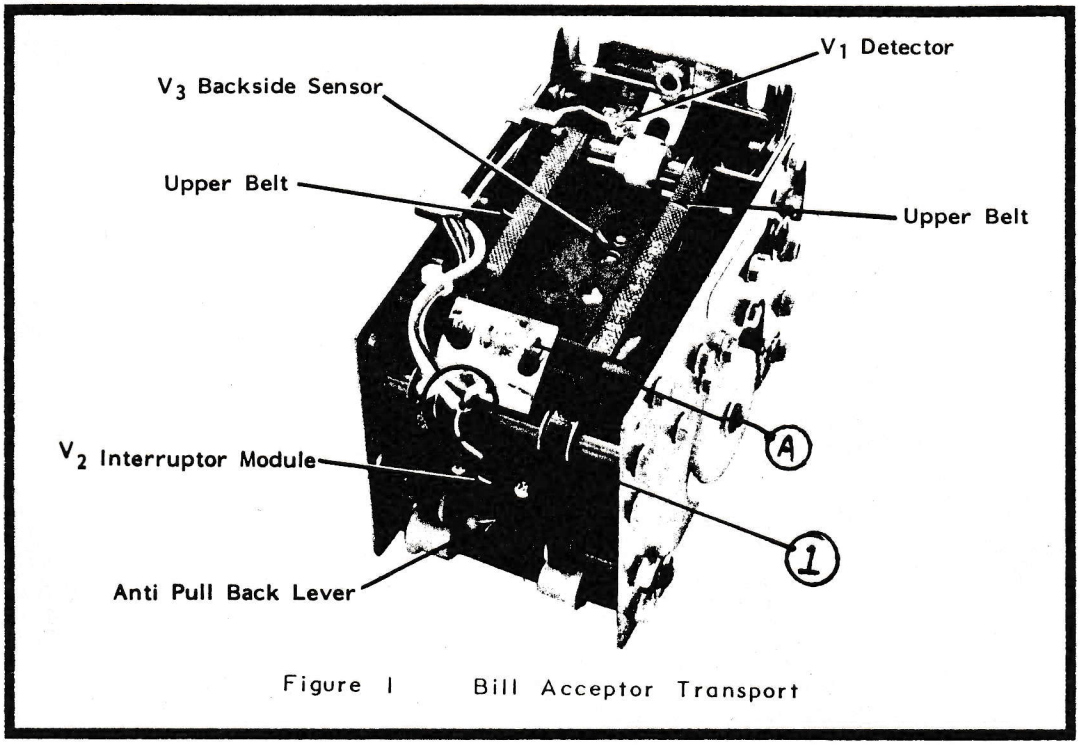



Figure 1 Bill Acceptor Transport

(#1) POINTS TO THE SHIELDED GREY COVERED TWO WIRE CORD.
THE TWO BLACK WIRES INSIDE ARE CONNECTED TO THE P.C. BOARD (A)
IF THE SHIELD **IS STICKING OUT FROM AROUND IT'S PLASTIC COVER AND TOUCHES ANY PART OF THE METAL CASING OR COVER IT WILL PREVENT YOUR MACHINE FROM TAKING ANY MORE CURRENCY.**

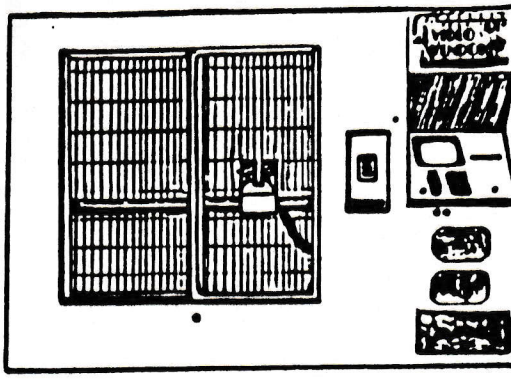
IF YOU SEE THIS PROBLEM CORRECT IT BY COVERING THE EXPOSED SHIELD WITH ELECTRICAL TAPE OR BY MOVING THE WIRE SO THAT THEIR IS NO WAY IT CAN TOUCH ANY PART OF THE METAL CASE.

ALSO SEE BULLETIN #19 FOR CORRECT ADJUSTMENTS OF THE O.B.A.

VIDEO VENDOR
4236 MAIN STREET
SKOKIE, IL. 60076
Service Department

# Technical Service Bulletin 26a

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓



*DECEMBER 5, 1988*

*SUBJECT: DOLLAR BILL VALIDATOR REFUSING TO ACCEPT BILLS.*

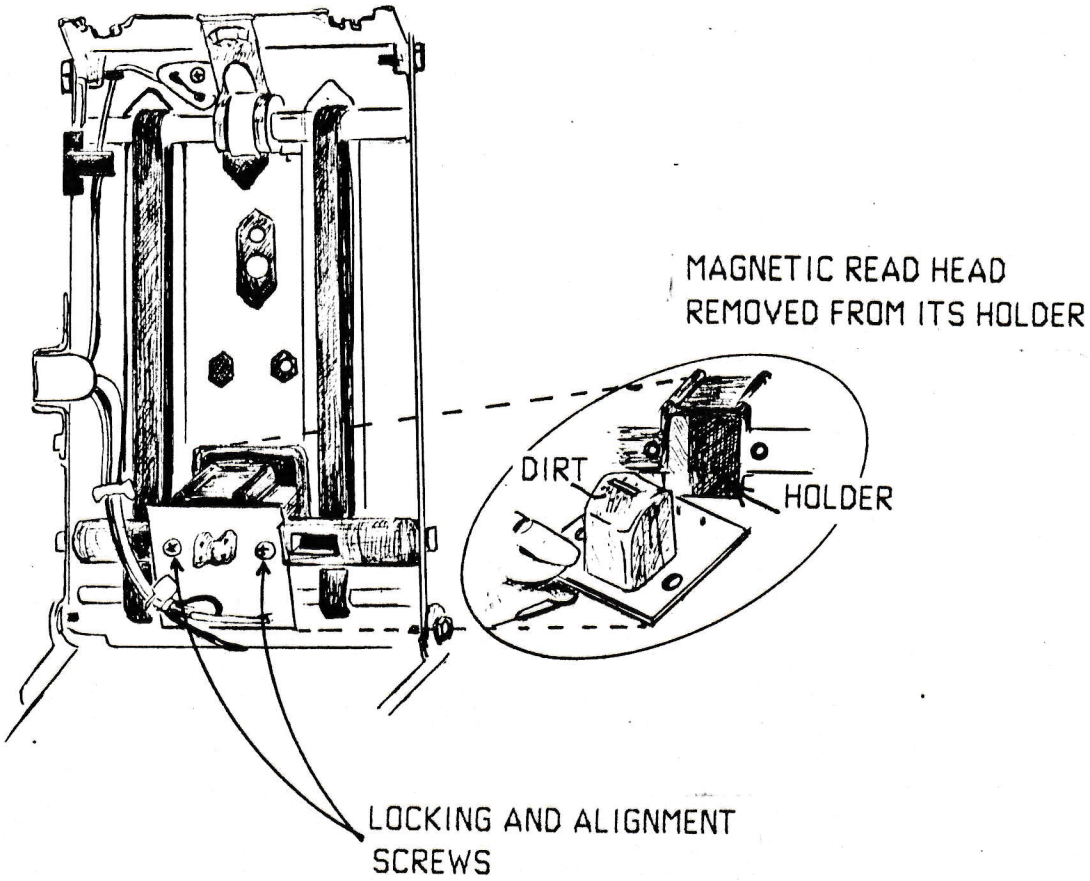
IF THE DOLLAR BILL VALIDATOR STILL TAKES DOLLAR BILLS INTERMITTENTLY AFTER DOING THE ADJUSTMENTS IN BULLETIN #19 AND YOU HAVE CHECKED FOR AN EXPOSED SHIELD GROUND SHORT. THE NEXT POSSIBILITY COULD BE DIRT ON THE MAGNETIC READ HEAD.

TO CLEAN THE HEAD TURN OFF THE AC POWER TO THE VIDEO VENDOR. OPEN THE TOP METAL SERVICE DOOR AND LIFT THE COVER ON THE DOLLAR BILL ACCEPTOR. THIS WILL GIVE YOU THE VIEW SHOWN IN FIGURE # 2. NOW REMOVE THE TWO SMALL ALLEN LOCKING AND ALIGNMENT SCREWS HOLDING THE MAGNETIC READ HEAD IN PLACE. AFTER THE SCREWS ARE REMOVED THE MAGNETIC READ HEAD SHOULD COME OFF AS SHOWN IN FIGURE #2 INSET. THE HEAD ASSEMBLY MIGHT NOT COME OUT EASY AFTER THE SCREWS ARE REMOVED SO PRY IT OUT CAREFULLY. DO NOT BREAK THE PLASTIC CIRCUIT BOARD TO WHICH IT IS ATTACHED.

ONCE THE HEAD IS REMOVED EXAMINE IT WITH A MAGNIFYING GLASS FOR DIRT. CLEAN IT WITH LIGHTER FLUID AND EXAMINE IT AGAIN.

REINSERT THE MAGNETIC READ HEAD AND INSTALL THE SCREWS. TURN POWER ON AND TEST THE BILL ACCEPTOR IN FEATURE #19 DIAGNOSTICS.

FIG. 2

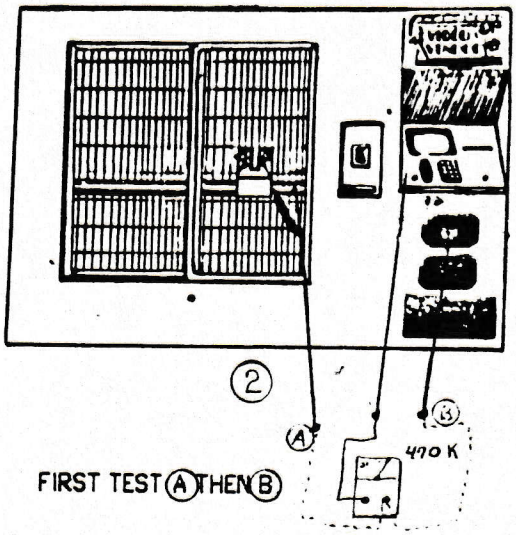


VIDEO VENDOR, INC
4235 W. MAIN ST.
SKOKIE, ILLINOIS 60076
(312) 982-0440

# TECHNICAL SERVICE BULLETIN #27

ATTN: SERVICE DEPARTMENTS

5/5/88




## KEYBOARD LOCK-UP

THE FOLLOWING IS A LIST OF CONDITIONS AND CHECKS TO MAKE IF THE KEYPAD LOCKS UP AND YOU CAN'T REGAIN CONTROL.

1. **KEYPAD LOCKS UP WHILE YOU ARE IN DIAGNOSTICS FEATURE 19.**
Probable cause is the grabber out signal is not yes and the software program is trying to pull the grabber out and cannot accomplish the move.

You can recover control of the keypad by pushing the master reset button on the MPB 1000 board or turning power off and on effectively resetting the machine. The grabber problem could be caused by a loose belt, loose set screw on drive pulley or electrical failure of the drive circuit.

2. **KEYPAD LOCKS UP UNDER NORMAL CUSTOMER USE.**
**Problem caused by static electricity or poor grounding.**

Check: Grounding of front metal plate on customer panel. (The plate that goes over the monitor and printer). There should be 470,000 OHMS resistance between that plate and the metal frame of the cassette storage or horizontal transport rail and the chrome lip of the dollar bill validator. If you get an extremely high reading, then the left side of the customer panel is not tight. If you get a low reading, a ground short exists at the cash box container and the under part of the bill validator on the front metal service door. **Check for insulation tape on the front lip of the cash box where the dollar bills fall through the opening in the cash box.** If there is not tape on it or the tape is scratched off, replace the tape but do not cover the opening where the bills fall through.

3. **KEYPAD LOCKS UNDER NORMAL CUSTOMER USE.**
**Check to see that the keypad cable connector is making a solid connection.**

If all above fails to resolve the problem and the AC power to the Vendor has other equipment on the same line, order a MPB 1000 filter board part #A-3083. The filter will aid in suppressing transient electrical noise from getting in the system and causing problems.

VIDEO VENDOR, INC
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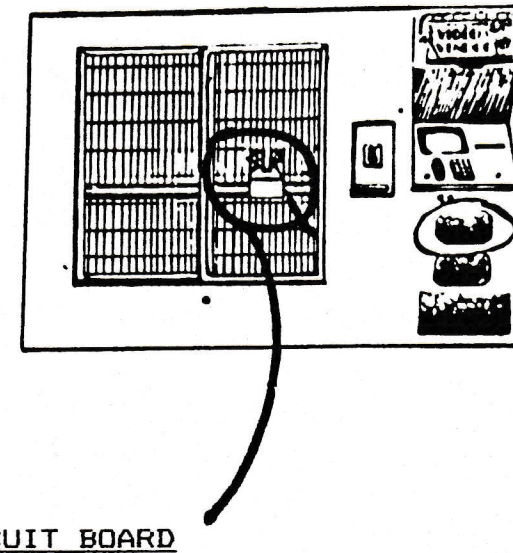
SKOKIE, ILLINOIS 60076
(312) 982-0440

# TECHNICAL SERVICE BULLETIN 28

5/25/88

**ATTN: SERVICE DEPARTMENTS**

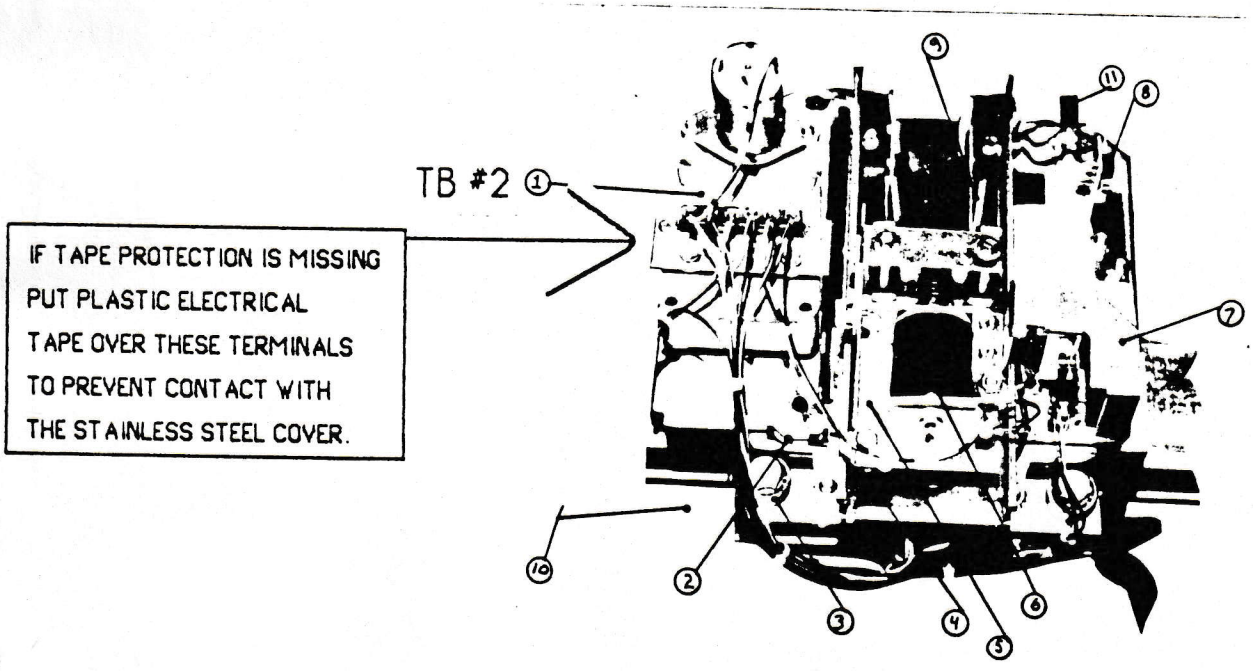


## PREMATURE FAILURE OF THE TAPE TOP CIIRCUIT BOARD

IF THE ELECTRICAL INSULATING TAPE COVERING THE SIX PIN TERMINAL STRIP TB#2 SHOULD COME OFF, IT IS POSSIBLE FOR THE TRANSPORT COVER TO CAUSE 28 VOLTS TO BE PUT ON THE TAPE TOP CIRCUIT BOARD. THIS WILL CAUSE PREMATURE FAILURE OF THE BOARD.

THE SOLUTION TO THIS PROBLEM IS TO CHECK THIS TERMINAL BOARD AND INSTALL THE ELECTRICAL INSULATION TAPE IF IT IS MISSING.

PICTURED BELOW IS A REPRESENTATION OF THE RETRIEVER ASSEMBLY WITH THE COVER REMOVED.



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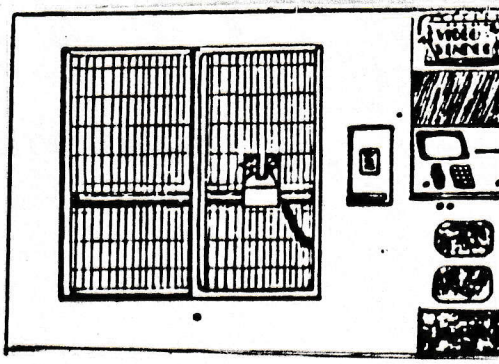


TECHNICAL SERVICE BULLETIN #29

*AUGUST 30, 1988*

SUBJECT: GRABBER SOLENOID TROUBLE SHOOTING TECHNIQUE.

THE GRABBER IS THE DEVICE THAT CLAMPS ONTO THE CASSETTE AND MOVES IT ON AND OFF THE SHELF. THE FOLLOWING ARE SOME OF THE CAUSES AND CORRECTIONS TO PROBLEMS THAT MIGHT ARISE IN GRABBER FAILURES.

| CAUSE | CORRECTION |
|---|---|
| 1. *GRABBER FAILS TO CLOSE.* | (A) NO VOLTAGE AT GRABBER TERMINALS. SHOULD BE AT LEAST 19 VOLTS. (FIG. 1)<br>(B) CHECK DIODE ACROSS GRABBER TERMINAL FOR SHORT. PARTICULARLY IF YOU BLOW THE FUSE WHEN THE GRABBER CLOSES. (FIG. 2)<br>(C) CHECK FOR BROKEN GRABBER WIRE. (USUALLY AT THE POINT WHERE WIRE GOES TO SOLENOID COIL OF GRABBER.)<br>(D) CHECK FOR DEFECTIVE GRABBER SOLENOID OR MCB 1000 BOARD. VOLTAGE AT J3 PIN 10 SHOULD BE 29 VOLTS WHEN GRABBER IS OPEN AND 0 VOLT WHEN GRABBER IS CLOSED. SEE BULLETIN 13 FOR MEASUREMENTS.<br>(E) CHECK THAT GRABBER TERMINALS ARE NOT TOUCHING ANY METAL SURFACE. (FIG. 1) |
| 2. *CASSETTE SLIDES OUT OF GRABBERS GRIP.* | (A) CLEAN GRABBER PADS WITH DENATURED ALCOHOL SOLUTION OR REPLACE GRABBER PAD IF WORN.<br>(B) CHECK GAP BETWEEN GRABBER PADS. IT SHOULD BE 1 1/4".(FIG. 2)<br>(C) CHECK BRASS SCREW (MAGNETIC BRAKE) ONLY ONE THREAD SHOULD BE SHOWING ON INSIDE OF THE SOLENOID TUBE.(FIG. 1) |
| 3. *GRABBER RELEASES INTERMITTENTLY FOR NO APPARENT REASON.* | (A) REPLACE GRABBER WIRES BETWEEN GRABBER & TERMINAL (FIG.2).<br>(B) CHECK GAP BETWEEN INSIDE DIMENSION OF GRABBER PADS. SHOULD BE 1 1/4". (FIG. 2) |

4. *GRABBERS WILL NOT RELEASE.*

(A) CHECK THE BRASS SCREW ADJ. (MAGNETIC BREAK) ONLY ONE THREAD SHOULD BE SHOWING ON THE INSIDE OF THE SOLENOID TUBE. (FIG. 1)

(B) CHECK FOR MECHANICAL BINDS CAUSED BY THE STAR LOCK WASHER COMING OFF THE PIN HOLDING THE GRABBER IN PLACE.(FIG. 2)

5. *GRABBER FIRES TO EARLY AND DOES NOT GET THE CASSETTE OFF THE SHELF.*

(A) THE GRABBER IN MICRO SWITCH IS BAD GIVING A GRABBER IN SIGNAL TOO SOON. REPLACE SWITCH.(FIG. 2)

6. *GRABBER GOES ALL THE WAY IN BUT DOESN'T TRY AND GRAB A CASSETTE. MOTOR RUNS LONGER THAN USUAL.*

(A) THE GRABBER IN MICRO SWITCH IS BAD OR OUT OF ADJUSTMENT AND DOESN'T GIVE A GRABBER IN SIGNAL TO THE PROCESSOR BOARD. REPLACE THE SWITCH OR ADJUST THE GRABBER IN BRACKET. (FIG. 2)

(B) CHECK SENSORS, TAPE TOP, TAPE FRONT AND TOP BACK FOR MALFUNCTIONS.(FIG. 4)

7. *GRABBER DOESN'T MOVE BUT MOTOR RUNS.*

(A) CHECK URETHANE DRIVE BELT FOR SLIPPAGE .

(B) CHECK SET SCREW ON BELT DRIVE PULLEY. INSURE IT IS TIGHT.

(C) CHECK DRIVE BELT CLAMP FOR TIGHTNESS. ALSO THE BELT KEEPERS SOMETIME CATCH THE BELT WELD POINT AND PREVENT BELT FROM DRIVING.

(D) GRABBER OUT SWITCH IS NOT WORKING AND "Z" MOTOR IS TRYING TO PULL THE GRABBER OUT AGAINST REAR STOP. (FIG. 3) REPLACE SWITCH.

8. *GRABBER DOESN'T MOVE AND Z MOTOR DOESN'T RUN.*

(A) "Z" MOTOR BAD. (FIG. 4) CHECK VOLTAGE ACROSS MOTOR TERMINALS. IT ALTERNATES DEPENDING ON DIRECTION. SEE BULLETIN 13A.

FIG. 1

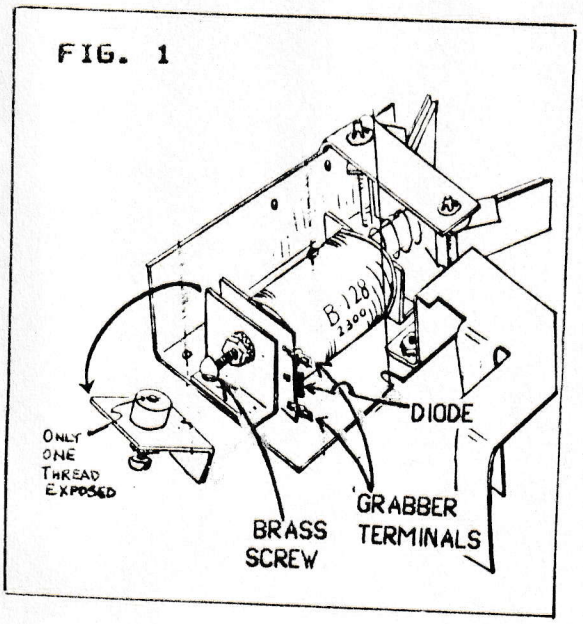



FIG. 2

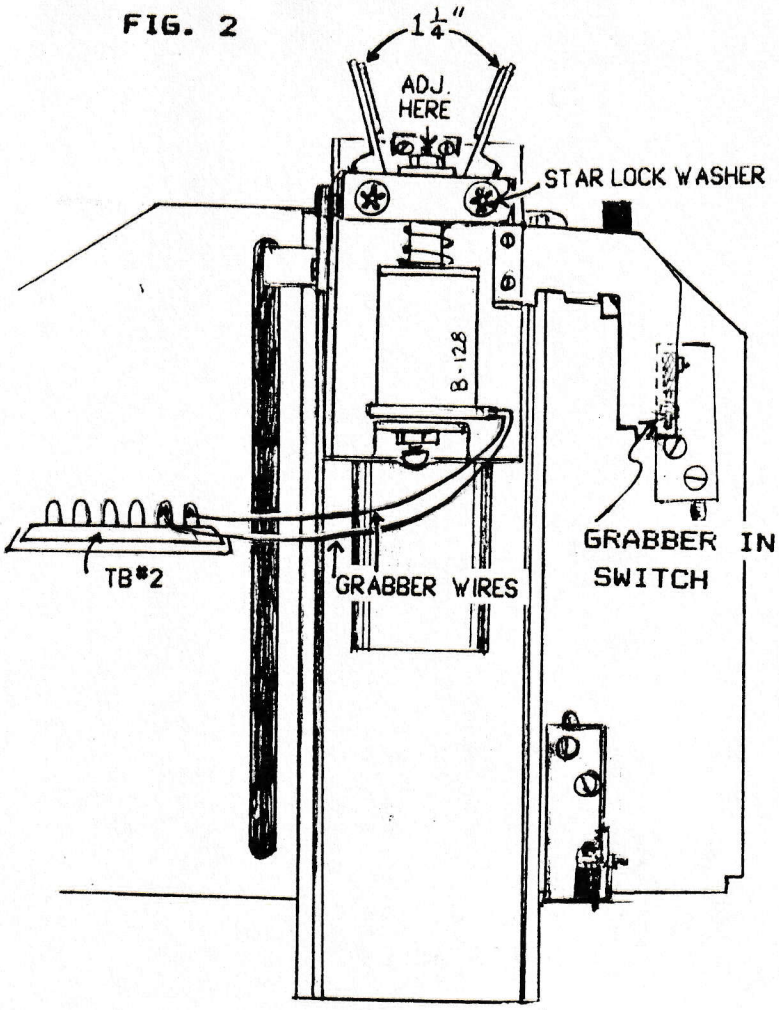



FIG. 3

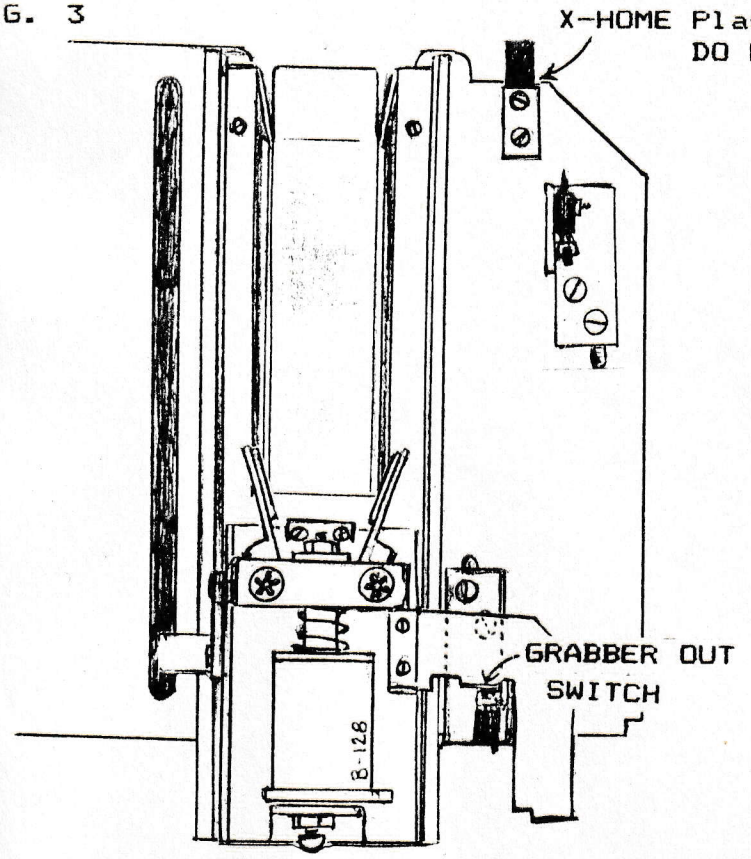
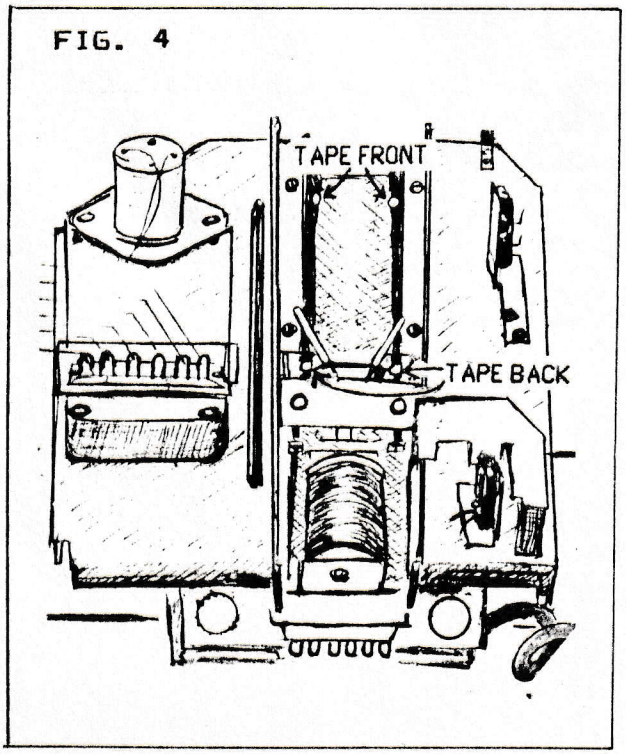



FIG. 4



VIDEO VENDOR
4235 W. MAIN STREET
SKOKIE, ILLINOIS 60076
312-982-0440

**TECHNICAL SERVICE BULLETIN # 30.**

SEPTEMBER 23, 1988

*SUBJECT*: **BODY DETECTOR ADJUSTMENT & TEST PROCEDURE.**

THE BODY DETECTOR IS AN ELECTRONIC SENSOR LOCATED ON A CIRCUIT BOARD (PART # B-3061) BEHIND THE TWO SMALL RED LENSES IN FRONT OF THE CUSTOMER CONSOLE. (FIG. 1)

THE PURPOSE OF THE BODY DETECTOR IS TO DETECT THE PRESENTS OF A CUSTOMER STANDING IN FRONT OF THE VIDEO VENDOR. THE SENSOR WILL LOCK ON (YES) WHEN A CUSTOMER STANDS WITHIN THE SENSOR FIELD. IF THE PERSON MOVES OUT OF THAT FIELD, THE BODY SENSOR GOES TO A "NO" CONDITION AND ASSUMES THAT CUSTOMER WALKED AWAY FROM THE MACHINE. THE TRANSACTION IS TERMINATED ON A "NO" CONDITION UP UNTIL THE TRANSACTION IS FULLY PAID.

ON A RENTAL OR RETURN, AT THE END OF PAYMENT THE CUSTOMER MAY LEAVE THE SENSOR FIELD WITHOUT THE VENDOR TERMINATING THE TRANSACTION

BEFORE ATTEMPTING ADJUSTMENT OF THE BODY DETECTOR, CHECK THE METAL SHIELD ON THE BODY DETECTOR BOARD. THE SHIELD MUST HAVE ITS EXTERNAL GREEN GROUND WIRE ATTACHED OR THE BODY DETECTOR BOARD WILL WORK ERRATICALLY BY STAYING ON, NOT GOING OFF OR NOT COMING ON AT ALL.

THE RANGE OF THE SENSOR FIELD IS A FIELD 7" WIDE BY 30" LONG. THIS FIELD WILL VARY DEPENDING ON THE SETTING OF THE BODY DETECTOR ADJUSTMENT POT. (FIG. 1) THE BODY DETECTOR ADJUSTMENT IS LOCATED ON THE BODY DETECTOR BOARD. THE BOARD IS MOUNTED BEHIND THE TWO RED LINES. (FIG. 2) YOU GAIN ACCESS TO THE BOARD BY OPENING THE COIN DOOR (THE TOP BLACK METAL DOOR). THE ADJUSTMENT IS A SMALL SCREW ON THE END OF A BLUE POT LOCATED MOUNTED ON THE BODY DETECTOR BOARD. TURNING THE POT CLOCKWISE (CW) LENGTHENS THE SIZE OF THE FIELD. TURNING THE POT COUNTER CLOCKWISE SHORTENS THE FIELD. THE POT HAS AN EFFECTIVE RANGE OF 25 TURNS. AT THE END OF IT'S RANGE THE POT WILL CONTINUE TO TURN. YOU WILL HEAR A CLICKING SOUND BUT EFFECTIVELY NOTHING MORE IS HAPPENING.

THE BEST METHOD OF ADJUSTING THE POT IS TO TURN IT CLOCKWISE UNTIL YOU HEAR A CLICK. AT THE SOUND OF THE CLICK TURN THE POT 2 TURNS COUNTER CLOCKWISE. THE CLICK MEANS YOU HAVE REACHED THE END OF THE ADJUSTMENT. CONTINUED TURNING OF THE POT AFTER THE CLICK WILL HAVE NO EFFECT OR MAY DAMAGE THE POT.

TO TEST THE BODY SENSOR ADJUSTMENT GO INTO FEATURE 19 DIAGNOSTICS AND OBSERVE THE BODY SENSOR (YES/NO) INDICATOR ON THE LOWER LEFT OF THE CRT SCREEN. HOLD A PIECE OF PAPER IN THE SENSOR FIELD AND MOVE IT SLOWLY TOWARD THE MACHINE FROM A DISTANCE GREATER THAN 40", UNTIL THE BODY DETECTOR SIGNALS YES. THAT IS THE BEGINNING OF THE SENSORS FIELD. THE REASON FOR MOVING THE PAPER SLOWLY IS THAT THERE IS A 2 SECOND DELAY IN THE CIRCUITRY TO ELIMINATE ELECTRICAL NOISE.

IF THE BODY SENSOR IS LOCKED UP AND YOU ARE NOT SURE THE PROBLEM LIES IN THE BODY DETECTOR YOU CAN DO THE FOLLOWING. REMOVE THE 5 PIN CIRCUIT PLUG FROM THE BODY DETECTOR BOARD. THE INDICATION ON THE CRT SCREEN SHOULD GO TO:

BODY SENSOR NO

NEXT INSTALL A JUMPER WIRE IN THE END OF THE 5 PIN PLUG BETWEEN THE GREEN WIRE (GROUND) AND THE PURPLE WIRE (SIGNAL TO PROCESSOR) THE INDICATION ON THE SCREEN SHOULD GO TO: (FIG.3)

BODY SENSOR YES

IF BOTH THESE TESTS ARE POSITIVE YOUR PROBLEM IS WITH THE BODY DETECTOR BOARD, AN ADJUSTMENT OR REPLACEMENT IS NEEDED. IF EITHER ONE IS DIFFERENT YOUR PROBLEM IS WITH THE MICRO PROCESSOR MPB 1000.

FIG. 1

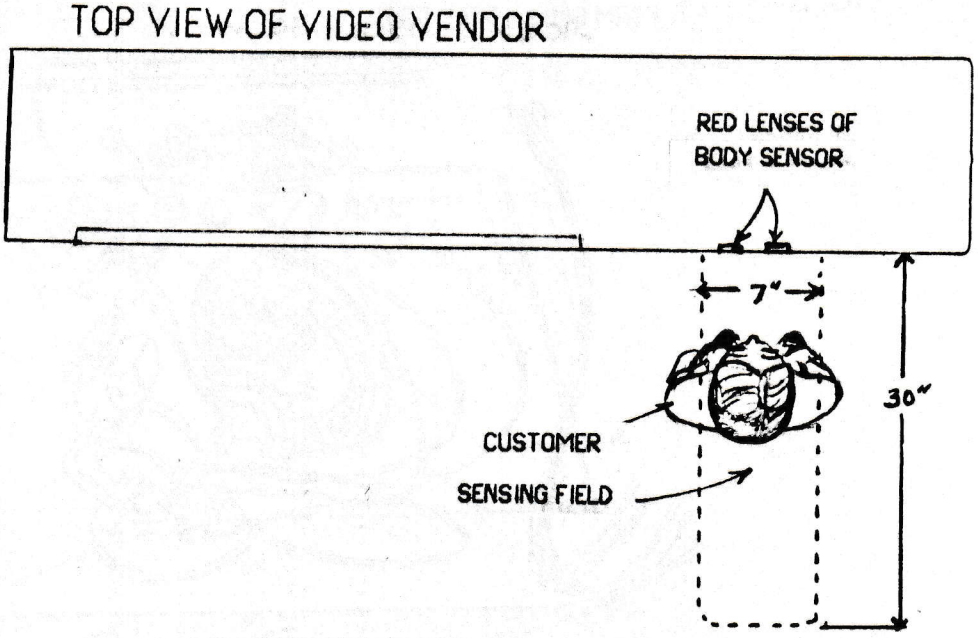

TOP VIEW OF VIDEO VENDOR
RED LENSES OF BODY SENSOR
7"
30"
CUSTOMER
SENSING FIELD

FIG. 2

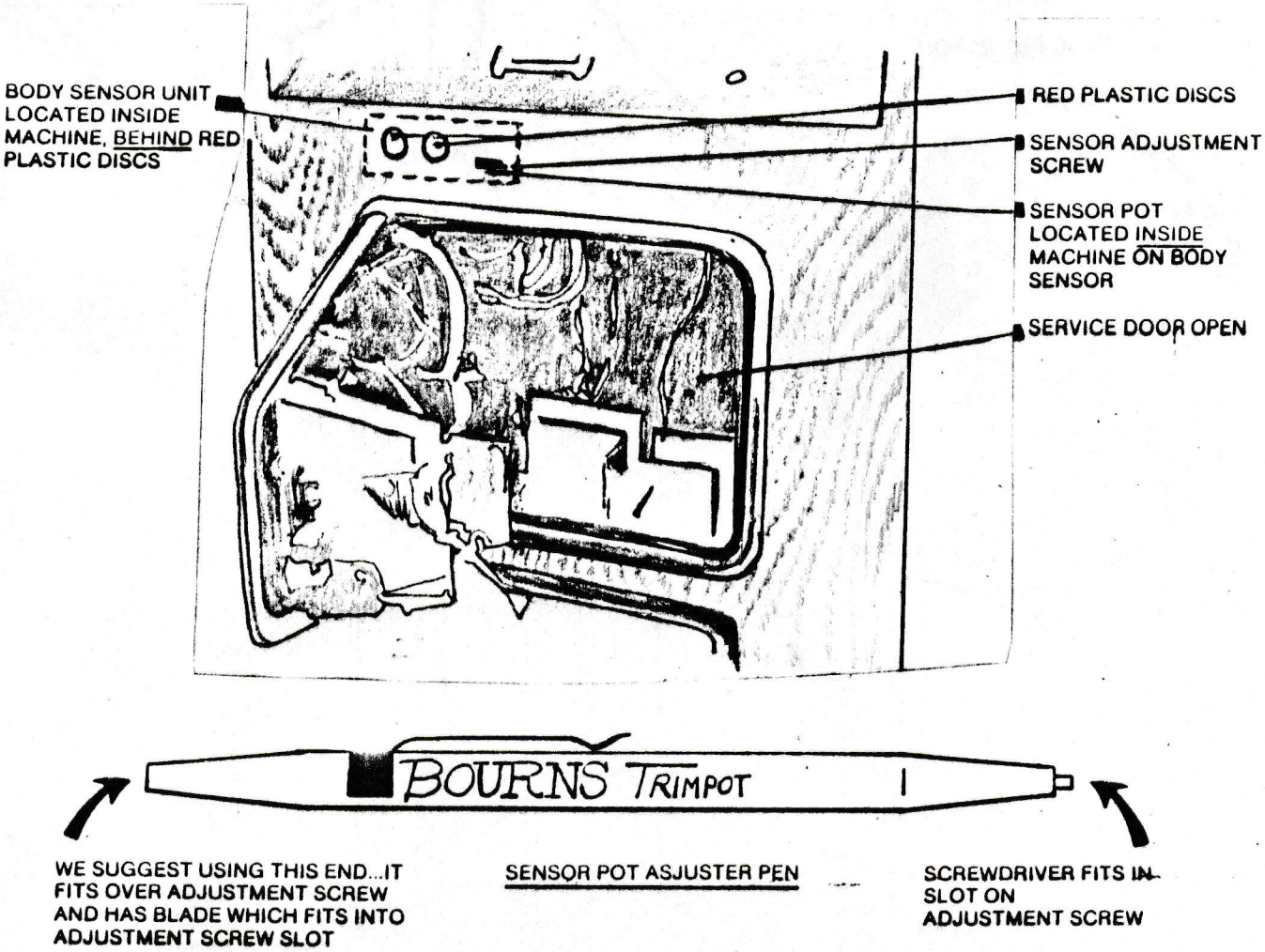
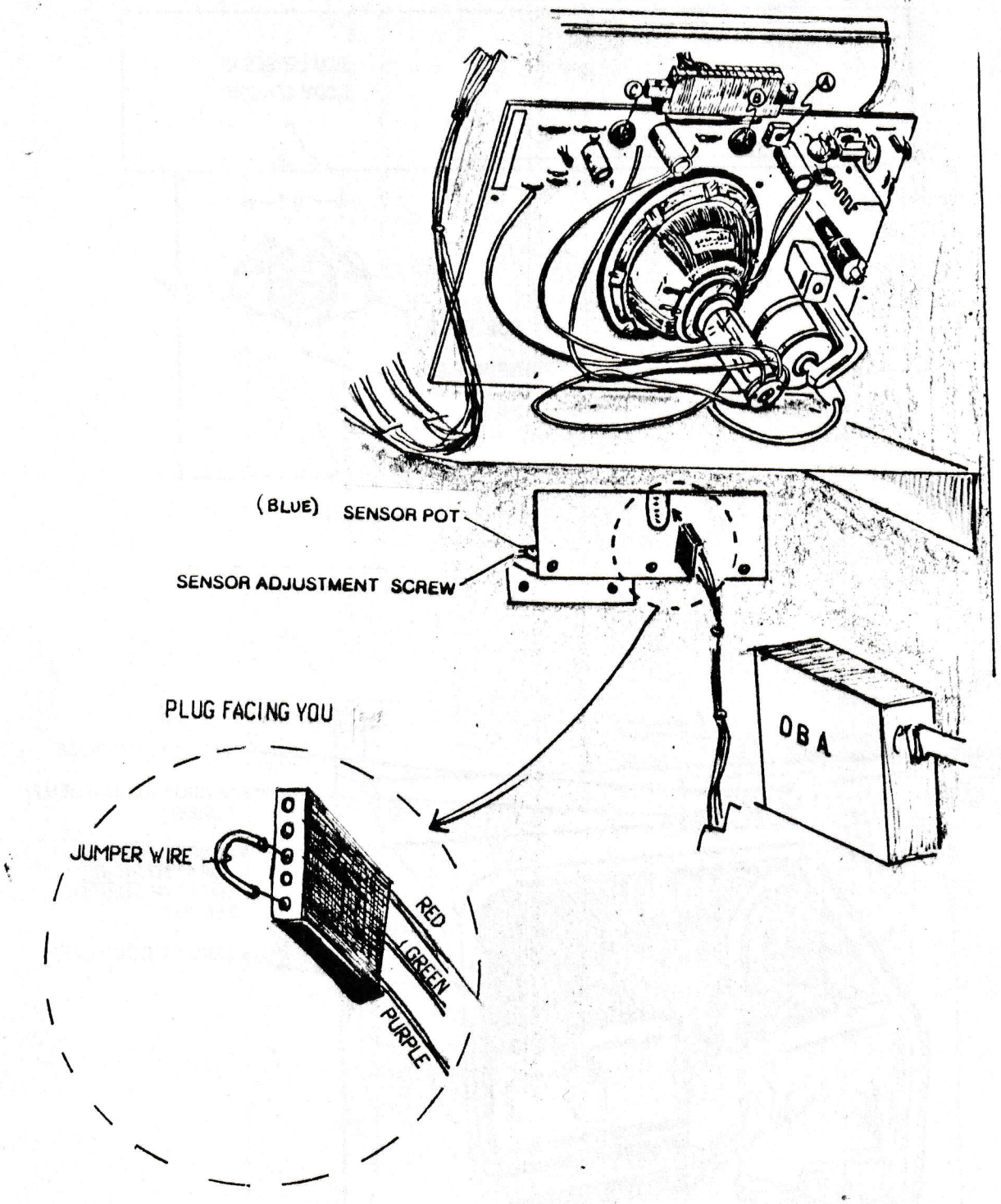

BODY SENSOR UNIT LOCATED INSIDE MACHINE, BEHIND RED PLASTIC DISCS
RED PLASTIC DISCS
SENSOR ADJUSTMENT SCREW
SENSOR POT LOCATED INSIDE MACHINE ON BODY SENSOR
SERVICE DOOR OPEN
BOURNS TRIMPOT
WE SUGGEST USING THIS END...IT FITS OVER ADJUSTMENT SCREW AND HAS BLADE WHICH FITS INTO ADJUSTMENT SCREW SLOT
SENSOR POT ASJUSTER PEN
SCREWDRIVER FITS IN SLOT ON ADJUSTMENT SCREW

FIG. 3

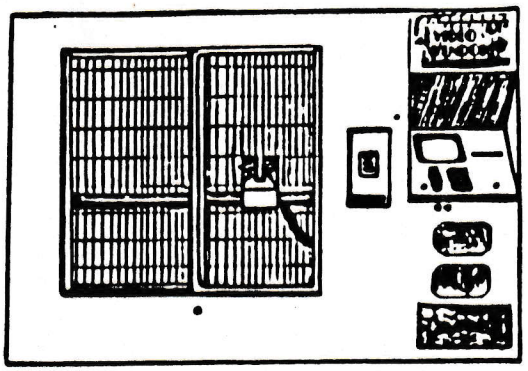
VIEW INSIDE VENDOR
FROM SMALL REAR DOOR



**VIDEO VENDOR**
4235 MAIN STREET Service Department
SKOKIE, IL 60076

# Technical Service Bulletin 31

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ✓



*DECEMBER 10, 1988*

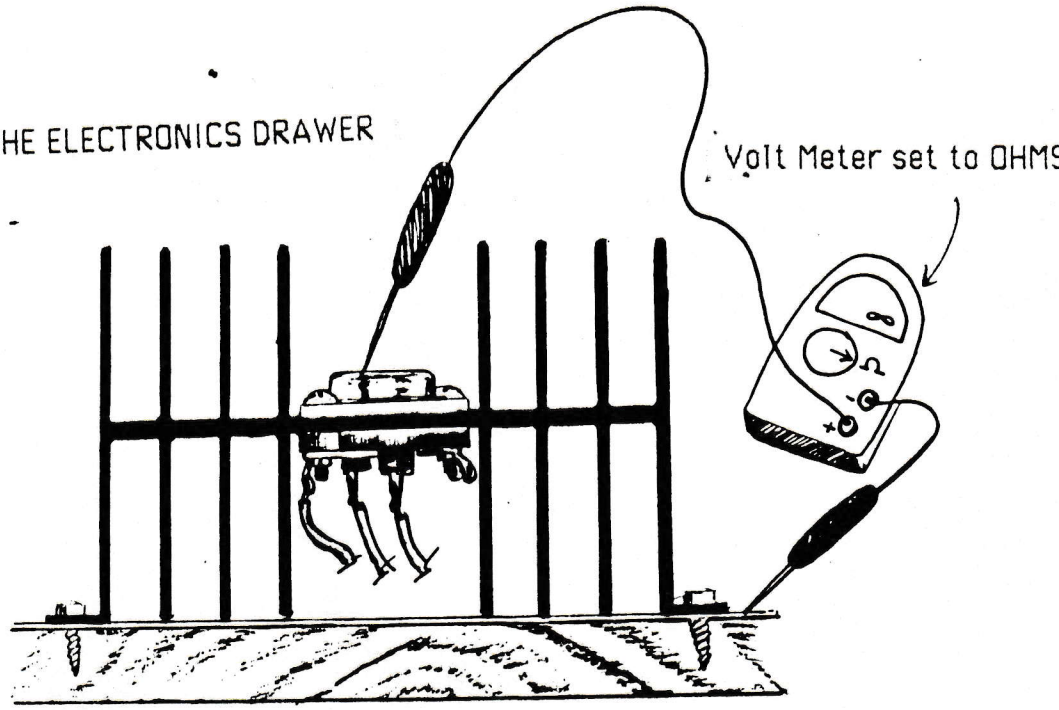
***SUBJECT: BODY DETECTION LOCK UP AFTER A MONEY TRANSACTION.***

WE HAVE FOUND A PROBLEM WHICH CAUSES THE BODY DETECTOR TO HANG UP WITH A YES CONDITION AFTER THE VENDOR TURNS ON THE BILL ACCEPTOR. THIS IS NOT USUALLY A BODY SENSOR PROBLEM, RATHER IT IS A SHORTED POWER TRANSISTOR IN THE MOTOR CONTROLLER POWER SUPPLY. OTHER SYMPTOMS ARE YOU MAY NOTICE THE TRANSPORT MOVING AT A MUCH HIGHER THAN NORMAL SPEED; THE ROBOT MAY HOME OK AT THE BOTTOM (Y) AXIS OF THE MACHINE BUT WILL NOT FIND HORIZONTAL (X) HOME AT THE ACCESS DOOR WHILE TRYING TO VEND A TAPE TO A CUSTOMER.

TO DIAGNOSE THE PROBLEM IF YOU OBSERVE THE DESCRIBED SYMPTOM. TURN OFF THE A.C. POWER TO THE VENDOR BY THE POWER SWITCH ON TOP OF THE VENDOR. OPEN THE ELECTRONICS DRAWER AND LOCATE THE HEAT SINK ASSEMBLY PICTURED IN FIG. 1. CONNECT AN OHM METER AS SHOWN IN THE PICTURE, ONE LEAD ON THE METAL SURFACE OF THE TRANSISTOR AND ONE LEAD ON THE METAL PLATE OF THE DRAWER. YOU MAY HAVE TO SCRATCH THE LEADS AGAINST THE POINTS IN QUESTION IN ORDER TO MAKE GOOD CONTACT. THE READING SHOULD BE VERY HIGH IN THE 50 MILLION OR MORE RANGE, INFINITY READING IS PREFERRED. A LOW READING UNDER A MILLION OHMS INDICATES A LEAKY OR SHORTED TRANSISTOR WHICH MUST BE REPLACED. ORDER PART # A-3080 HEAT SINK ASSEMBLY.

FIG. 1

REAR LEFT SIDE OF THE ELECTRONICS DRAWER

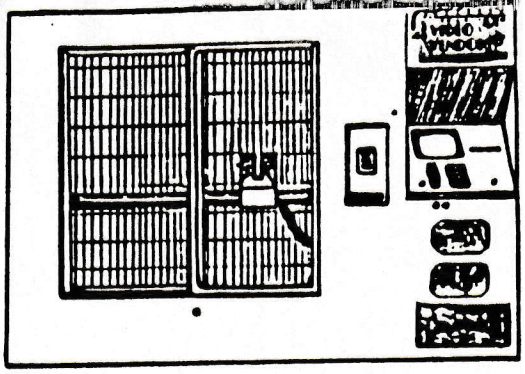



POWER TRANSISTOR AND HEAT SINK PART # A-3080: HEAT SINK ASSEMBLY

**VIDEO VENDOR**
4235 MAIN STREET Service Department
SKOKIE, IL. 60076

# Technical Service Bulletin 32

Of Interest ☐ General Manager ☐ Sales Manager ☐ Service Manager ☐ Parts Manager Service Technicians ☑



*DECEMBER 15, 1988*

SUBJECT: ACCIDENTAL RETURNING OF CUSTOMER TAPES.

***THE VENDOR SAYS THAT A TAPE FROM 1-20 WHICH IS REALLY OUT IS IN.***

THIS SITUATION CAN EASILY OCCUR AND IS USUALLY A TAPE WHOSE SLOT IS FROM 1-20. IT HAPPENS WHEN YOU ARE SERVICING THE MACHINE IN OPTION #18-RETURN TAPES.

IF THE SERVICE PERSON DOES NOT CHECK TO MAKE SURE THEY HAVE EXITED BACK TO THE MENU BEFORE CHOOSING ANOTHER SERVICE ITEM, THEY WILL IN ACTUALITY RETURN A TAPE INSTEAD OF CHOOSING A MENU OPTION. USUALLY YOU'LL FIND THE TAPES RETURNED BY THIS ACCIDENT ARE #2, #3, #10. ***ALWAYS WATCH THE SCREEN.*** THE SERVICE PERSON MUST GO TO THE MAIN MENU BEFORE PROCEEDING TO HIS NEXT FUNCTION WHICH IS USUALLY FEATURE #2 ADD CREDITS. BY PRESSING THE "2" BUTTON WHEN HE IS NOT IN MENU HE INADVERTENTLY RETURNS TAPE #2, IF IT HAPPENS TO BE OUT. HE MAY ALSO RETURN OTHER TAPES IF HE IS NOT CAREFUL.

VIDEO VENDOR
service department

# TECHNICAL SERVICE BULLETIN 33

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

February 23, 1989

SUBJECT: **CASH IN CASH BOX COMING UP SHORT.**

We have found that short of someone removing the money from the cash box we submit the following list of things to check if your cash box count comes short of the total sales:

1. Check the credit card register whether you are using it or not. If it has been turned on and a customer has made a charge, the charge must be subtracted from the total to equal the cash in the box. Some users not using credit cards in their machines have inadvertently turned on the credit card system and found customer charges causing this problem..

2. The dollar bill validator has six set switches located in the black box just inside the service door. The first 5 switches must be turned off and the 6th switch turned on for proper counting of money. If you have to change any of these switches you must turn the AC power to the Vendor off and then on again to electrically set the switches after making a change.

3. If the coin acceptor jams while a customer is inserting coins the Vendor will count extra coins. This problem will only happen with software version 2.10 or lower.

VIDEO VENDOR
service department

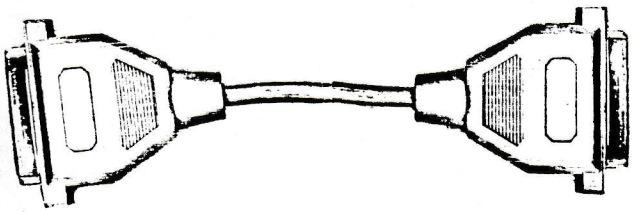
# TECHNICAL SERVICE BULLETIN 34

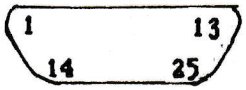
4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

## OCTOBER 1, 1989

### CONNECTING THE RS-232 PORT TO THE OUTSIDE WORLD

FOR CUSTOMERS WHO WISH TO SET UP COMMUNICATIONS BETWEEN THEIR VIDEO VENDOR AND AN OUTSIDE COMPUTER THRU THE RS-232 INTERFACE, THE FOLLOWING INFORMATION WILL BE OF VALUE TO YOU.

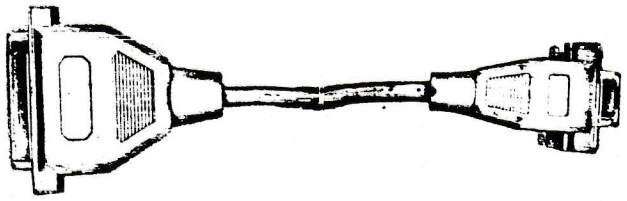


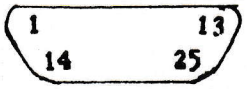




OUTPUT OF VIDEO VENDOR RS-232 PORT

TO MODEM OR COMPUTER

| 25 PIN PLUG (OUT) | | 25 PIN PLUG (IN) |
|---|---|---|
| 2 | TxD | 3 |
| 3 | RxD | 2 |
| 6 | DSR | 20 |
| 7 | SIG GND | 7 |
| 20 | DTR | 6 |
| 4 | RTS | |
| | ← JUMPER | |
| 5 | CTS | |







OUTPUT OF VIDEO VENDOR RS-232 PORT

TO MODEM OR COMPUTER

| 25 PIN PLUG (OUT) | | 9 PIN PLUG IN |
|---|---|---|
| 2 | TxD | 2 |
| 3 | RxD | 3 |
| 6 | DSR | 4 |
| 7 | SIG GND | 5 |
| 20 | DTR | 6 |
| 4 | RTS | |
| | ← JUMPER | |
| 5 | CTS | |

VENDOR SENDS:
- 8 DATA BITS
- NO PARITY
- 1 STOP BIT
- BAUD RATES TO 4800 SELECTABLE

YOU MAY FIND THIS SETTING WORKS BETTER ON SOME SOFTWARE:
- 7 DATA BITS
- EVEN PARITY
- 1 STOP BIT

VIDEO VENDOR
service department

# TECHNICAL SERVICE BULLETIN 35

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

## OCTOBER 15, 1989

### TROUBLESHOOTING CHECKLIST WHEN VENDOR FAILS TO RENT TAPES

If the Vendor stops renting tapes, check the following items for proper operation.

1. Area Code, Store Code: If inadvertently changed, correct codes in Feature 12.
2. Hold Machine: Check if machine is "On Hold" in Feature 11.
3. Hold Tape: See Feature 7, Print list Feature 13 sub 1.
4. Tape Labels - missing or badly installed: Check label in Feature 16, also see Service Bulletins 12 & 20.
5. Tape Upside Down: Turn it over.
6. X-Rating: Check if tape is inaccessible due to X-Rating in feature 9. If X-Rating should not be activated, turn off.
7. PIN number On: If PIN number should not be activated, turn off. See Feature 11 sub.
8. Body Sensor not working: Test in Feature 19. If necessary correct according to procedure in Service Bulletins 30 & 31.
9. Printer not working: Test in Feature 19.
10. Clock not working: Check upper right corner of monitor. If necessary, set in Feature 14.
11. Customer Credit Card bad or Card Reader bad: Check in Feature 10 and 19
12. Customer on "Bad List": Check in Feature 10.
13. Customer's Card Expired: Check in Feature 10.
14. Customer Owes Money: Check in Feature 10.
15. Customer Member Number not in Data Base: Check in Feature 10.
16. Customer already has Two Tapes Out: Check in Feature 10.
17. Tape Slot already rented out: Check in Feature 10.
18. Machine in a Down Load - transmitting: Check in Feature 21.
19. Override Slot has a tape in it that customer wants: Check in Feature 11. Tape may be unavailable because it is damaged.

20. Magnet on Cover fell off or is not aligned: Check according to procedure in Service Bulletin 22.

21. Credit Card Feature not turned on: Check in Feature 11.

22. Mechanical Malfunction:

a) Grabber IN Switch : See Service Bulletin 21.

b) Tape Top : See Service Bulletin 28.

c) Tape Back not working.

d) Belt Fell Off: See Service Bulletin 2.

e) Broken Wire on Grabber: See Service Bulletin 29.

f) Z-Motor OUT or Broken Wire: See Service Bulletin 29.

g) Microprocessor Board bad: Check according to procedure in Service Bulletin 13.

h) Motor Control Board bad: Check according to procedure in Service Bulletin 13A.

i) Interlock Wires Reversed or Broken: See item #13 of Installation Checklist in Owners Manual.

VIDEO VENDOR
4235 w. Main st. Skokie, Illinois 60076 (312) 982-0440

MAY 4, 1988

**INSTALLATION INSTRUCTIONS FOR CONVERTING 2-CHIP PROCESSOR BOARDS TO 3-CHIP BOARDS**

*CAUTION:* Only an experienced person who knows how to solder should do this. If you do not know how to solder, DO NOT attempt this procedure. You may wish to exchange your current board for a 3-chip board. Call Video Vendor for details.

*Please READ THE ENTIRE PROCEDURE BEFORE BEGINNING.*

**CAUTION: READ THE PINK HANDLING OF MEMORY DEVICES BULLETIN BEFORE BEGINNING.**

1. Power OFF and OPEN Electronics drawer.
2. REMOVE Bubble Card and place it on a piece of aluminum foil. Wrap over edges to protect the card from static discharge from main processor board.
3. DISCONNECT J2, J3, J4, J5, J6, J7 and J8 cable connectors.
4. REMOVE Main Processor Board (MPB-1000) by removing its screws. Some boards are not mounted with screws but use plastic standoffs; on those boards you should push the retaining barb in then lift off that corner. Repeat on all the other barbs until the board is free.

5. *Changing the Jumpers on MPB-1000.*
   a. LOCATE W6 and W8 jumpers on MPB-1000. See FIG 1, detail A.
   b. UNSOLDER both ends of the W6 jumper wire, holding it firmly with long nosed pliers and carefully pull it up and out of W6.
   c. INSERT the wire into W7 as shown in detail B, and SOLDER in place. Solder on both sides of the board.
   d. REPEAT the procedure in step 5b for the jumper at W8 to remove its wire.
   e. INSERT and SOLDER the wire into W9 as shown in detail B.
6. CAREFULLY, REMOVE old PROM 0 location U3 and REPLACE it with Version 3 PROM 0.
7. CAREFULLY, REMOVE old PROM 1 location U9 and REPLACE it with Version 3 PROM 1.
8. CAREFULLY, REMOVE 1st 24-pin 2K RAM chip (next to PROM 1) location U13 and REPLACE it with Version 3, PROM 2.
9. CAREFULLY, REMOVE 2nd 24-pin 2K RAM chip location U19 and REPLACE it with the 28-pin 8K RAM Memory chip. See FIG 2.
10. REINSTALL MPB-1000 corner screws, J-connectors and Bubble Card.
11. CLOSE door and power ON.

If the Vendor powers up and acts normally, you have accomplished the change-over correctly. errors, blank screen or any abnormal operation, can indicate that a chip is not installed correctly. Power down and recheck connections and proms. Power up. If problem persists, power down and call.

VIDEO VENDOR
service department

# TECHNICAL SERVICE BULLETIN 36

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

DECEMBER 15, 1989

**SUBJECT: Non-Linear X Count**

**Symptom:** The retriever experiences non-linearity on either the extreme right or left of the machine. Adjusting the X Count does not alleviate the problem.

## Check the following:

1. Run the retriever up to slot 150 in Feature 19. Grasp the retriever and try to move it to the left or right.
2. Check the X Motor Chain. The horizontal chain furthest from you should hang no more than one inch lower than the front chain.

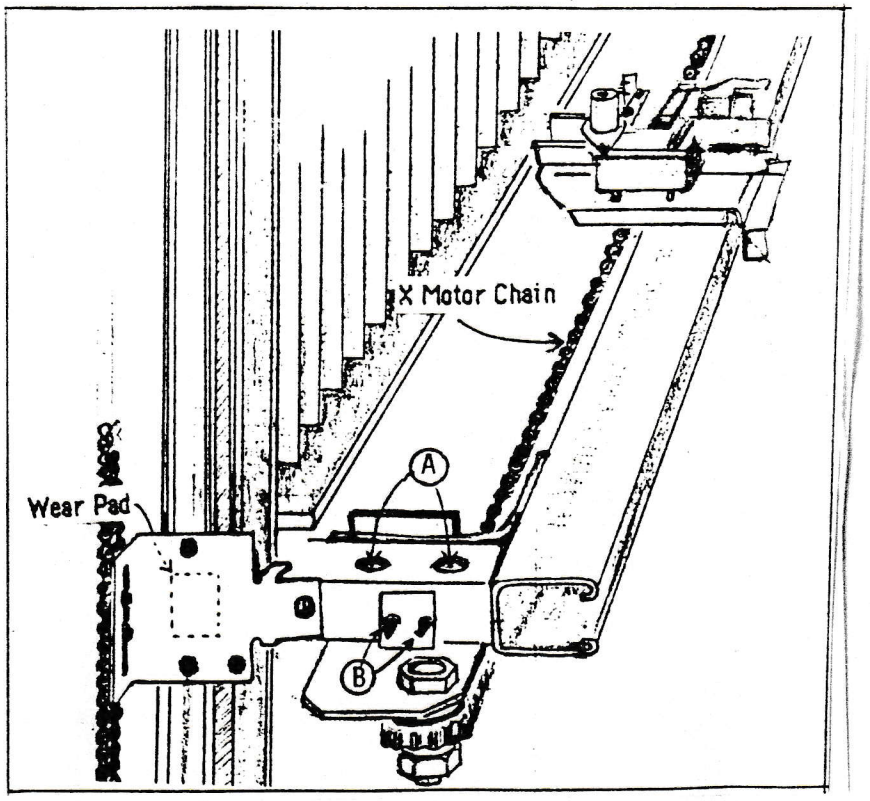
In both of these cases, if the retriever moves or if the chain hangs down too much; the repair is to tighten the chain.

3. Check the Wear Pads on the vertical rails. If a wear pad has fallen off or is extremely worn down, replace it by cleaning the bracket and sliding in a new pad. Order Pt.#4A-1034.

## To Adjust the X Chain:

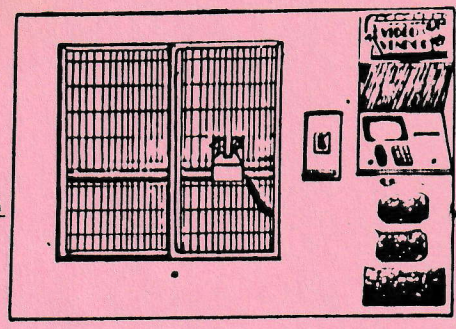
Loosen the locking nut located through holes at point "A". Then, to tighten the chain, tighten the nuts at point "B". Or, to loosen the chain, loosen the nuts at point "B".

When finished lock down the nuts located through holes at point "A".



VIDEO VENDOR,INC
4235 W. MAIN ST.
SKOKIE,ILLINOIS 60076
(312) 982-0440

# TECHNICAL SERVICE BULLETIN # 3A



4/28/88

**ATTN: SERVICE DEPARTMENTS**

## HANDLING OF MEMORY DEVICES

***CAUTION***

Extreme care should be exercised when handling the memory modules, (Bubble Memory, RAM chips and ROM chips) which store the programs that operate the Video Vendor. These devices are state of the art and extremely reliable, however they are also vulnerable to accidental static electrical discharge. While handling these devices you should use good grounding protection techniques at all times. Grounding protection begins with a properly grounded A.C. electrical outlet. Install a circuit tester into the A.C. outlet which checks proper grounding and electrical polarity. If anything is wrong do not plug the Video Vendor in or anything else into that outlet until an electrician repairs the problem.

After assuring you have a correctly grounded machine plug the power cord back in. But make sure the power switch is off. this assures that the ground connection from the vendor to your outlet is complete. Next use a ground strap on your wrist. The ground strap should be connected to the metal holding bracket for the Bubble Memory Card (the one that has a caution message). This will provide a discharge path for any static while you are working with the Memory devices on the Vendor. Use these precautions even when removing the Memory devices from their packages.

**You should also do a full Bookkeeping before and after performing any work on the Memory devices. Even with all this protection there is no guarantee that you will not accidently cause a premature failure of one of these devices. Although their is a risk to losing data stored in your Bubble, the printouts you made would enable you to update your accounts.**

We beleive that the small risk involved for the short term is well worth the risk of handling the processor board for updating, in the long term. Version 3.00.04 software represents a major improvement to the Video Vendor's operation.

If preferred, we can supply you with an AC circuit tester, grounding wrist strap, IC chip inserter and soldering pick. Just order service kit X-103. The current cost for this kit is $30.00.

**Please call for help if you have any questions.**

VIDEO VENDOR
service department

# TECHNICAL SERVICE BULLETIN 37

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

**FEBRUARY 21, 1990**

**SUBJECT: ENCODER - INTERRUPTER DISC DEPTH**

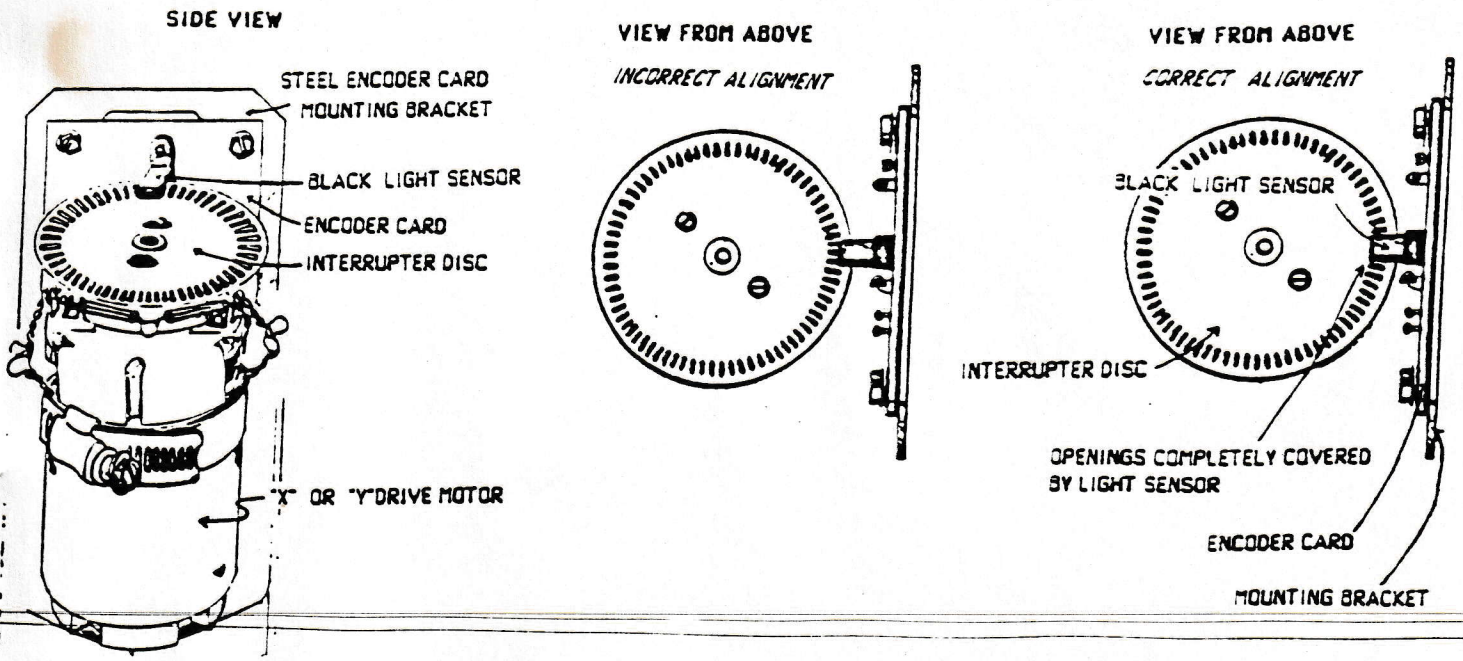
When the mechanical transport system always or occasionally but consistantly arrives at a location PAST the intended location, this most often indicates an encoder problem.

The cause is that the encoder does not read all the light pulses and allows the motor to send the mechanism further in order read the required number of pulses for a given location. If the openings of the interrupter disc are not completely covered by the sensor, counts (light pulses) are being missed and extra ones added.

Remedy: Make sure that the black light sensor is positioned DIRECTLY over the openings of the interrupter disc; such that it completely covers the ones beneath it (See Diagram). Check this on both the "X" AND "Y" Drive Motors. If the openings are only partially covered when passing through the sensor, you will need to bend the metal mounting bracket (See Diagram) toward the disc carefully so that the black sensor covers the openings completely. It may be necessary to remove the encoder interrupter disc to facilitate the bending operation.

Although the above represents the majority of faults regarding this problem, it is possible that you may have a faulty encoder card or a bad connection.

NOTE. This is NOT the problem if the retriever consistantly arrives SHORT of the intended location.



VIDEO VENDOR service department

# TECHNICAL SERVICE BULLETIN 38

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

MARCH 28, 1990

## ADJUSTING THE MAGNETIC LATCH ON THE ACCESS DOOR

**Test:** using the keypad in Diagnostics, Feature 19; raise the transport assembly so it is level to the access door in its normal delivery position and so that the magnetic interlock assembly (Fig. 1) is aligned. Pressing the "1" key should activate the door latch and green light allowing the door to be raised.

**Problem:** You hear a humming sound when you activate the access door with the green light lit but the door does not open. If you can reach in and move the steel latch a little towards the magnetic coil and then it pulls in, you will need to adjust the magnetic coil bracket **closer** to the armature (steel latch).

To do this, loosen the two screws (one on each leg) of the magnet mounting bracket (see Fig. 2). Slide the bracket 1/32" to 1/16" towards the armature (Fig. 2, arrow A). Retighten the screws and check operation to be sure you did not position the magnet **too close** to the armature. This would cause the door latch to be unable to clear the top of the door, also resulting in the access door not opening with the green light lit.

If the magnet is too close to the armature, it will pull but not draw the latch far enough to allow the door to open. You will need to loosen the two screws and slide the bracket 1/32" to 1/16" away from the armature (Fig. 2, arrow B). Retighten screws and check operation.

FIG. 1

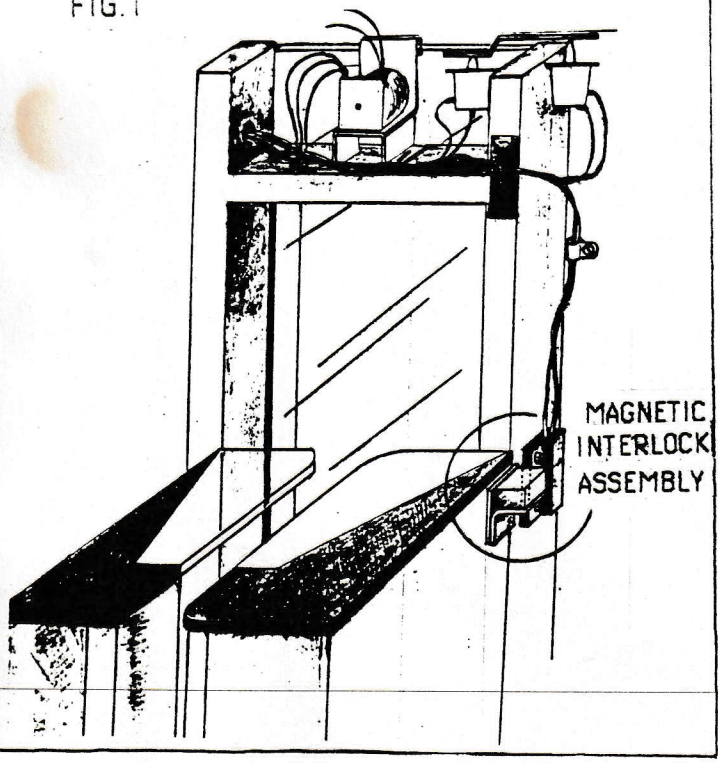
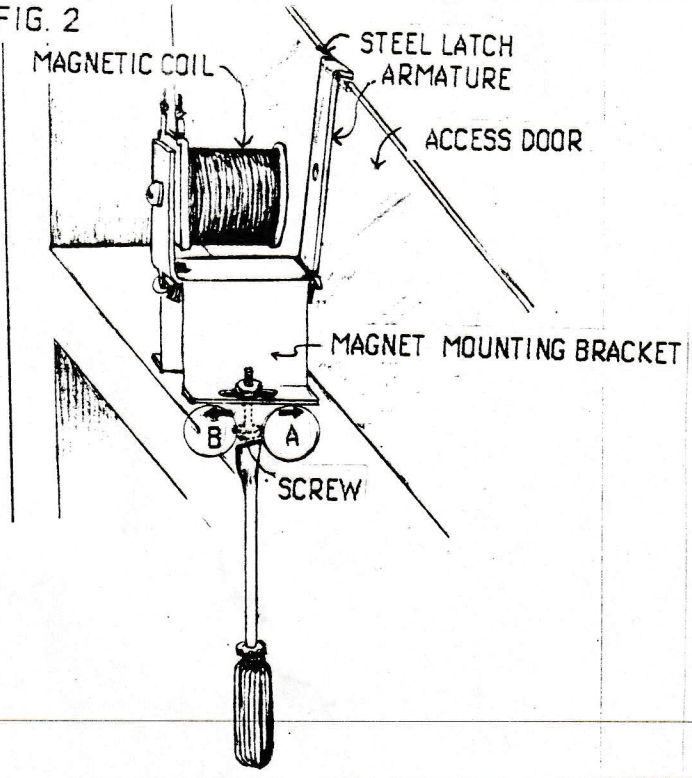



FIG. 2



VIDEO VENDOR service department

# TECHNICAL SERVICE BULLETIN 39

4235 WEST MAIN STREET SKOKIE, ILLINOIS 60076 (312) 982-0440

APRIL 18, 1990

## ADJUSTING VERTICAL DRIVE CHAIN TENSION

**PROBLEM:** If you notice that when renting a movie from locations below the access door, slots 200 - 320, the transport mechanism aligns correctly with the door entry. When renting from locations **above** the access door, 1 - 120, however; the mechanism does not line up with the access door and can be off by 1/4" - 1/2". The probable reason for this is that the vertical drive chain is too loose, so that when the motor reverses to bring the mechanism back, pulses (counts) are lost due to more chain looseness than was originally compensated for by the software.

Further, the problem may affect the operation of the access door. If the green light does not light and the access door does not release when renting movies from above the access door but works fine from locations below the access door, the short, vertical drive chain (see Diagram) will likely need to be tightened.

**TEST:** Manually turn the encoder disc (See Diagram) until the chain begins to move. Stop and turn the disc in the opposite direction. If you can rotate the disc **more** than 1/2 turn, the chain needs to be tightened.

**ADJUSTMENT:** Loosen the top nuts shown in the diagram. (If only a slight adjustment is needed, only the front ones need loosening, otherwise loosen all four top nuts.) Screw the lower nuts upward making gradual adjustments until the chain moves by turning the encoder disc a 1/4 - 1/2 rotation in the opposite direction. Don't forget to retighten the top locking nuts.